# ENFORCER®

## *Heavy-Duty Outdoor Access Control Keypad with Proximity Reader*

## SK-3133-PPQ
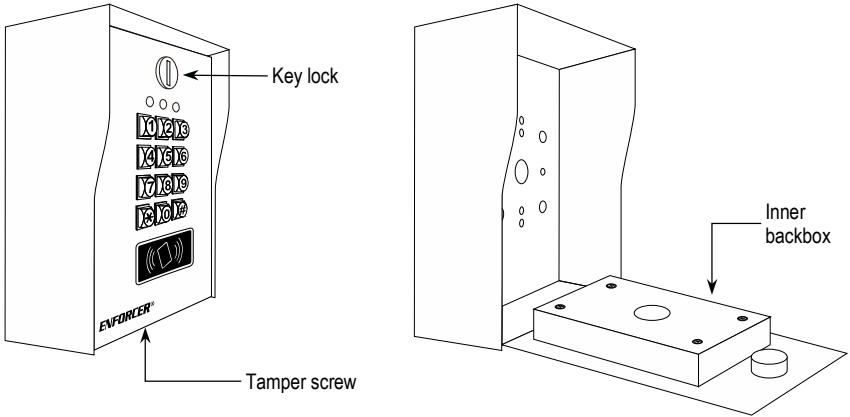
### Installation Manual

CE  RoHS

- Rugged construction – heavy-duty stainless steel faceplate with coated steel housing
- Built-in proximity reader
- 12~24 VDC/VAC Auto-adjusting operation
- Up to 1,000 possible *user codes/cards* for output 1 and 100 each for outputs 2 and 3
- Up to 50 possible *visitor codes*, for one-time or limited-time use (1~99 hours)
- Up to 50 *duress codes* for output 1 and 10 each for outputs 2 and 3
- Output 1: Form C relay, 5A@24VDC max. / output 2 and 3: Form C relay, 1A@24VDC max.
- Outputs 1, 2 and 3 can be programmed to activate for up to 99,999 seconds (nearly 28 hours)
- Wiegand output, 26, 34, 37 bits
- Tamper output, 50mA@24VDC max.
- All features are programmed directly from the keypad, no need for an external programmer
- EEPROM Memory protects programmed information in case of power loss
- Egress input lets users exit the premises without keying in the code
- Door sensor input for anti-tailgating operation
- Interlocking input for connecting to a second keypad
- Keypad illuminates when a button is pressed, programmable for FULL or AUTO in standby
- Vandal resistant, suitable for wall, post, or gooseneck mounting
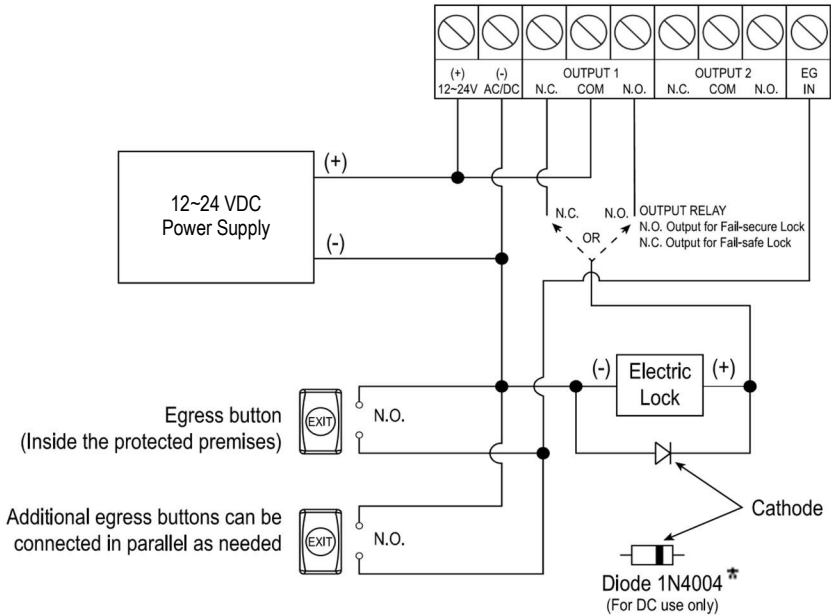- IP66 Weatherproof

## SECO-LARM®

## Quick Installation Guide

This page is for installers looking to do a basic installation and programming of the keypad. For more in-depth installation and programming instructions, see the *Table of Contents* on pg. 4.

## Mounting Diagram



Key lock

Inner backbox

Tamper screw

## Quick Wiring Diagram



*To protect the relay, you must install the included diode—with the cathode (striped end ——▢▮▭—— ) wired toward the positive side—for DC powered locks *unless* your lock has a diode built in.* AC powered locks and electromagnetic locks require a varistor/MOV (05D390K or similar, not included) wired in the same location *if the lock does not have one built in* (all SECO-LARM electromagnetic locks have built-in protection). Failure to use these as directed will void the warranty.

## Quick Programming Guide

This page is for installers looking to do a basic installation and programming of the keypad. For more in-depth installation and programming instructions, see the *Table of Contents* on pg. 4.

### Programming Tips

- The *master*, *super user*, *common user*, *visitor*, *duress*, and *user codes* cannot be the same.
- A flashing amber LED indicates the keypad is in standby mode. A solid amber LED indicates the keypad is in programming mode.
- If the *user code entry mode* is set for *auto entry*, your *user codes* will need to be the **same number of digits** as the *master code* (see *Programming User Code Entry Mode*, pg. 28).

### Programming Instructions

Follow the instructions below if the following covers your needs.

- A new *master code*
- A single 4-digit *user code* for all users and no proximity cards
- One output to unlock a door
- A 3-second delay time in opening the door after the output is activated

1. Turn off the beeping before the 1-minute power-up period ends

   `1` `2`   `#`

2. Enter programming mode

   `0` `0` `0` `0`   `*` `*`

   **NOTE:** The default *master code* is 0000.

3. Change the *master code*

   `0` `1`   `X` `X` `X` `X`   `#`

   **NOTE:** In the formula above, `X` `X` `X` `X` represents the new *master code*.

4. Set the user code to operate output 1 (unlock the door)

   `1` `0`   `2`   `0` `0` `0`   `X` `X` `X` `X`   `#`

   **NOTE:** `0` `0` `0` chooses user ID #000 of 1,000 possible users (000~999).

   `X` `X` `X` `X` is the new user code for user ID #1.

5. Set the *output delay time* (skip this step if the default value of 5 seconds is acceptable)

   `5` `1`   `3`   `#`
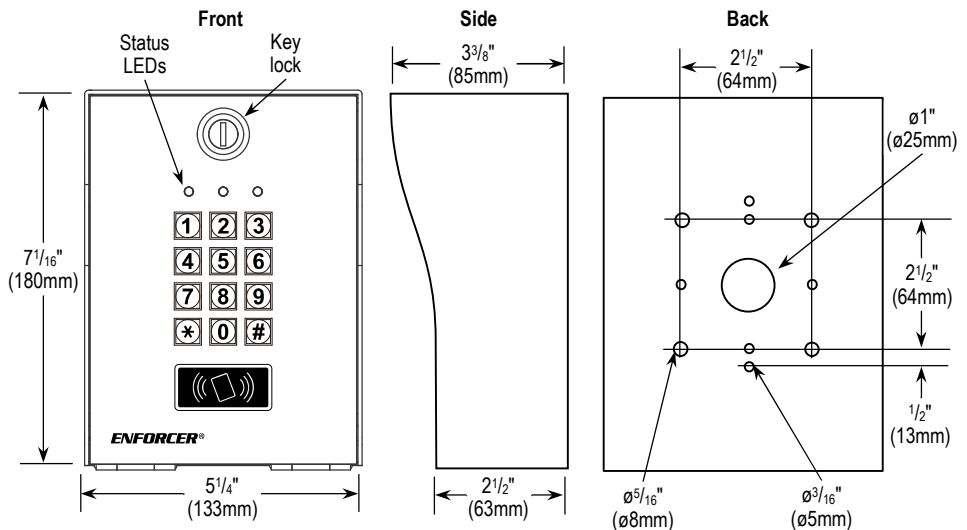
   **NOTE:** `3` sets the *output delay time* for 3 seconds.

6. Exit programming mode

   `*` `*`

## Table of Contents

## Overview

## Parts List

1x **Keypad with steel box**    2x **Keys***    1x **6-Pin Wiegand wiring harness**    1x **Diode**
1x **Mounting template**    4x **Mounting screws**    4x **Mounting screw anchors**    1x **Manual**
1x **Security wrench**

*No replacement keys available. Please make extra copies for safekeeping.

## Specifications

| | | |
|---|---|---|
| Operating voltage | | 12~24 VAC/VDC |
| **Current draw (@12VDC)** | Standby | 80mA |
| | Keypress | 114mA |
| | Output 1 active | 150mA |
| | Outputs 1 & 2 active | 180mA |
| | Outputs 1, 2, & 3 active | 220mA |
| | Wiegand data output | 150mA |
| | Total (max.) | 270ma |
| **Outputs** | #1 Form C | 5A@24VDC |
| | #2 Form C | 1A@24VDC |
| | #3 Form C | 1A@24VDC |
| | K or A | 100mA@24VDC |
| | Duress | 100mA@24VDC |
| | Interlock | 100mA@24VDC |
| | Tamper | 50mA@24VDC |
| | Wiegand | 26~37 bits |
| **Inputs** | Egress | N.O. Ground |
| | Door sensor | N.C. Ground |
| | Door inhibit | N.O. Ground |
| Proximity reader frequency | | 125kHz (EM125) |
| Proximity reader sensing distance | | $1^1/_2$" (38mm) |
| IP rating | | IP66 Weatherproof |
| Operating humidity | | 5~95%, non-condensing |
| Operating temperature | | -4°~158° F (-20°~70° C) |
| **Material** | Faceplate | $^1/_{16}$" (1.5mm) Stainless steel |
| | Housing | $^5/_{64}$" (2mm) Anodized steel, powder paint |
| Dimensions (including back box) | | $5^1/_4$"x$7^1/_{16}$"x$3^3/_8$" (133x180x85 mm) |
| Weight | | 3-lb 12-oz (1.7kg) |

## LED Indicators and Keypad Sounds

### LED Indicators

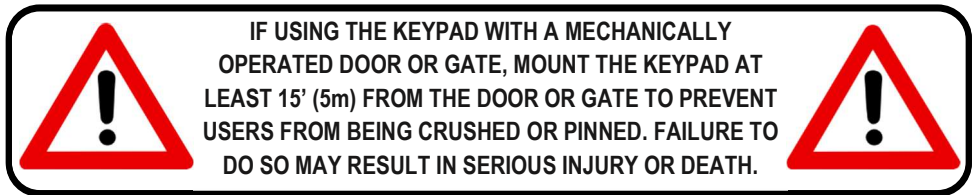| | Red LED (Left) | Amber LED (Center) | Green/Red LED (Right) |
|---|---|---|---|
| **Steady** | Output 1 inhibited | Programming mode | Output 1 activated (Green) Output 2 activated (Red) |
| **Flashing** | Inhibit mode paused | Standby mode | – |

### Keypad Sounds and Amber LED

| Status | Sounds* | Amber LED (Center) |
|---|---|---|
| **In programming mode** | – | Steady ON |
| **Successful key entry** | 1 Beep | 1 Flash |
| **Successful code/card entry** | 2 Beeps | 2 Flashes |
| **Unsuccessful code/card entry** | 5 Beeps | 5 Flashes |
| **Power up delay** | Continuous beeping | Continuous flashing |
| **Output relay activation†** | 1-Sec long beep | – |
| **In standby mode‡** | – | 1 Flash/second |
| **System restore mode** | 2 Beeps | Fast flashing for 2.5 minutes |
| **Code/card already stored** | 1 Long beep | – |
| **Real time clock stopped after power loss** | Continuous 3 fast beeps every 5 seconds | – |

*Keypad sounds can be programmed ON or OFF (see pg. 28).

†Output relay activation sounds can be programmed for 1-second long beep, 2 short beeps, or OFF (see pg. 29).

‡Amber LED flashing during standby mode can be programmed ON or OFF (see pg. 29).

## Important Notes



**IF USING THE KEYPAD WITH A MECHANICALLY OPERATED DOOR OR GATE, MOUNT THE KEYPAD AT LEAST 15' (5m) FROM THE DOOR OR GATE TO PREVENT USERS FROM BEING CRUSHED OR PINNED. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.**

1. Always disconnect power before servicing the keypad. Do not apply power until all connection wiring is completed.
2. The keypad must be properly grounded. Use a minimum of 22AWG wire connected to the ground terminal. Failure to do so may damage the keypad.
3. Allow at least 2ft (60cm) between this and any other keypads to avoid interference.
4. All wiring and programming should be done by a professional installer to reduce the risk of improper installation.
5. The user's guide for this keypad is located on pg. 34 of this manual.
6. Be sure to store this manual in a safe place for future reference.

## Installation

1. Unlock the keylock mounted on the face of the keypad with one of the included keys (see Fig. 2, below).
2. Remove the tamper screw from the bottom of the keypad with the included security wrench.
3. Open the faceplate of the keypad. The hinge will allow the faceplate to hang open during installation.
4. Remove the 1" wiring hole cover from the back of the keypad housing.
5. Install the keypad using the included mounting screws and mounting screw anchors (if necessary).

   **NOTE:** If attaching the keypad to a mounting plate, such as a gooseneck stand, use the 4 mounting plate holes located on the back of the keypad housing (see Fig. 1).

6. Remove the inner plastic back box to access the terminals (see Fig. 3, below).
7. Run the wire to the keypad location, then run the wire through the hole on the back of the housing.
8. Refer to the wiring diagram (pg. 8) and ensure that the backlit and K or A jumpers are properly set.
9. Connect the wires to the keypad according to the wiring diagram on pg. 8.
10. Finish assembly by replacing the inner back box, closing and locking the keypad, and replacing the tamper screw.
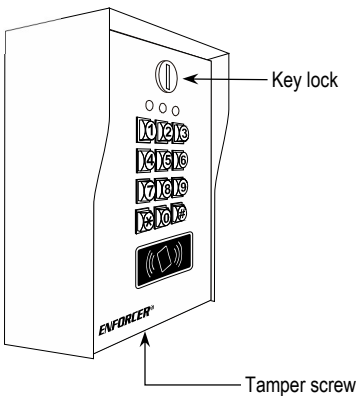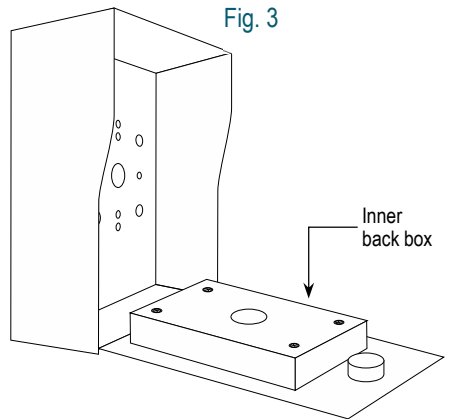
Fig. 1

These holes are used to mount the keypad to a gooseneck stand.

Fig. 2

Key lock

Tamper screw

Fig. 3

Inner back box

# Wiring Diagram

## Connection Terminals

| Terminal | | Description |
|---|---|---|
| **12~24 VAC/VDC** | | Connect to a 12~24 VAC/VDC power supply. **Observe polarity**. |
| **Relay output 1** | **N.C.** | NO/NC/COM 5A@24VDC max. |
| | **COM** | |
| | **N.O.** | |
| **Relay output 2** | **N.C.** | NO/NC/COM 1A@24VDC max. |
| | **COM** | |
| | **N.O.** | |
| **Egress input** | | N.O. Pushbutton contact to ground. Press button to initiate output 1. |
| **Relay output 3** | **N.C.** | NO/NC/COM 1A@24VDC max. |
| | **COM** | |
| | **N.O.** | |
| **K or A output** | | Transistor ground output, max. 100mA@24VDC. See *Jumper Settings* below for the "K or A" jumpers for programming details. |
| **Duress output** | | Transistor ground, max. 100mA@24VDC. Switches to ground (–) to trigger a silent alarm or other device when a user enters a duress code. |
| **Ground (–)** | | Common ground output |
| **Door sensor** | | Connect to an optional N.C. sensor such as a magnetic contact to monitor if a door is open or closed. Connect to ground (–) if not used. |
| **Output 1 inhibit** | | N.O. input, connect to interlock control of second keypad if needed so that if one keypad is used to unlock a door, the other is temporarily disabled. |
| **Interlock control** | | N.O. input, connect to Output 1 inhibit of second keypad if needed so that if one keypad is used to unlock a door, the other is temporarily disabled. |
| **Tamper N.C.** | | Tamper switch output, N.C. contact, max. 50mA@24VDC. Connect to the N.C. 24-hour protection zone of an alarm if needed. |
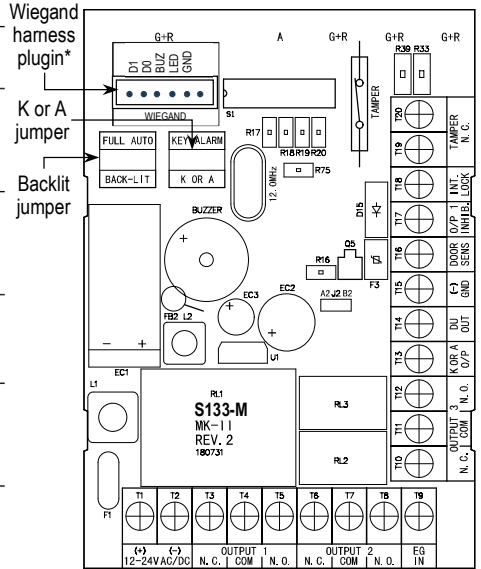
## Jumper Settings

| Jumper | Position | Description |
|---|---|---|
| **Backlit** | **Full** | Dim backlit during standby. Full backlit for 10 seconds after any button press. |
| | **Auto** | No backlit during standby. Full backlit for 10 seconds after any button press. |
| **K or A** | **Keypad** | Switches to ground (–) for 10 seconds after any button press. |
| | **Alarm** | Switches to ground (–) when alarm occurs to trigger optional auxiliary alarm. |

## Jumper Positions

Backlit – Full

Backlit – Auto

K or A – Keypress

K or A – Alarm
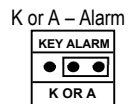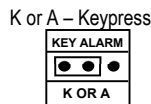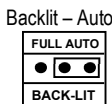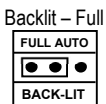
*For Wiegand wiring and setup, see *Wiegand Output* Setup, beginning on pg. 32.

## Sample Applications

### Stand-Alone Door Lock

In this application, the keypad is connected to a single door lock and an egress pushbutton.
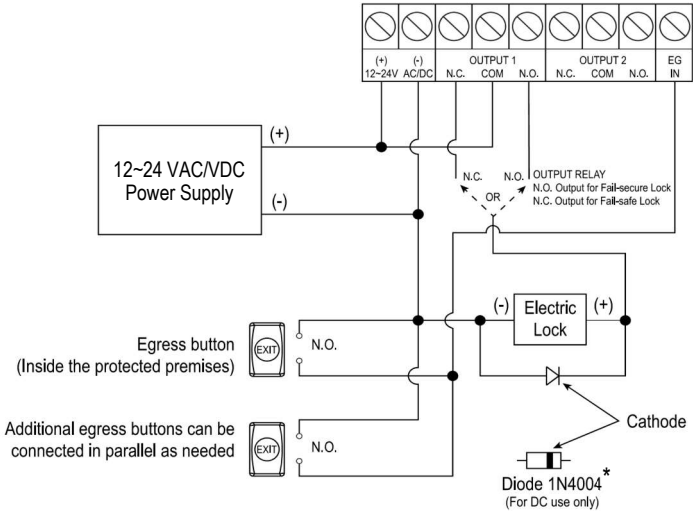


*To protect the relay, you must install the included diode—with the cathode (striped end ⟶▬▬⟶) wired toward the positive side—for DC powered locks *unless your lock has a diode built in.* AC powered locks and electromagnetic locks require a varistor/MOV (05D390K or similar, not included) wired in the same location *if the lock does not have one built in* (all SECO-LARM electromagnetic locks have built-in protection). Failure to use these as directed will void the warranty.

### Door-Hold-Open Mode

- For N.C. locking devices – Connect outputs in series with working device (see Fig. 1).

- For N.O. locking devices - Connect outputs in parallel with working device (see Fig. 2).

Fig. 1



Fig. 2



*To protect the relay, you must install the included diode—with the cathode (striped end ⟶▬▬⟶) wired toward the positive side—for DC powered locks *unless your lock has a diode built in.* AC powered locks and electromagnetic locks require a varistor/MOV (05D390K or similar, not included) wired in the same location *if the lock does not have one built in* (all SECO-LARM electromagnetic locks have built-in protection). Failure to use these as directed will void the warranty.

## Sample Applications (Continued)

### Inter-Lock System Using Two Keypads

In this application, two keypads are each connected to separate door locks and egress pushbuttons. While one door is open, the other cannot be opened.

- Use an N.C. magnetic contact or some other N.C. device to detect whether a door is opened or closed. Do this for the two doors being protected.



*To protect the relay, you must install the included diode—with the cathode (striped end ————) wired toward the positive side—for DC powered locks **unless** *your lock has a diode built in.* AC powered locks and electromagnetic locks require a varistor/MOV (05D390K or similar, not included) wired in the same location **if** *the lock does not have one built in* (all SECO-LARM electromagnetic locks have built-in protection). Failure to use these as directed will void the warranty.

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## Sample Applications for Auxiliary Terminals

### Duress Output

The *duress output* switches to (–) ground when a *duress code* is entered. You may use it to turn on an LED lamp and/or a small buzzer to notify a guard; or connect it to a *24-hour normally open protection zone* of an alarm system.



**NOTE:** Only one connection option shown above is recommended. Make sure that the sink current does not exceed the maximum rating of 100mA.

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## Sample Applications for Auxiliary Terminals (Continued)

### Door Sensor

Use a normally-closed door-position sensor (usually a magnetic contact) on the door to enable the use of the following functions.
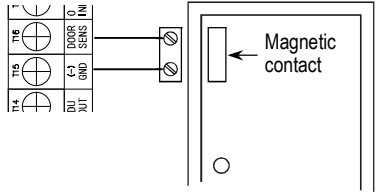


- **Door Auto Relock** – The system will immediately relock the door after the door is closed. This prevents unwanted "tailgate" entries, which can happen if an unauthorized person tries to follow an authorized person through the door.

- **Interlock Control** – When the door is open, the interlock output will give a (–) ground command to disable the other keypad in an interlock system

- **Door-Forced-Open Warning** – The keypad will beep and activate the alarm output whenever the door is forced open without using a valid user code, card, or egress input (see *Programming Door-Forced-Open Warning/Duration*, pg. 30).

- **Door-Propped-Open Warning** – The keypad will beep whenever the door is open longer than the programmed time (see *Programming Door-Propped-Open Warning/*Delay, pg. 29).

- **Door Open Warning** – The keypad will beep and activate the alarm output whenever the door is opened without using a valid user code or card (see *Programming Door-Open Warning/Duration*, pg. 30).

### Alarm Output

Set the K or A jumper to "A" (see *Jumper Settings*, pg. 8) to cause the alarm output to switch to ground (–) in *door-forced-open* or the *door open after egress delay*. You may use it to turn on an LED lamp and/or a small buzzer to notify a guard; or connect it to a 24-hour *normally open protection zone* of an alarm system. See *Programming Door-Forced-Open Warning/Duration*, pg. 30 and *Programming Door-Open Warning/Duration*, pg. 30.
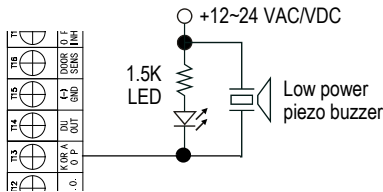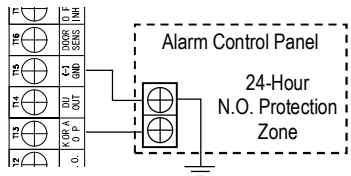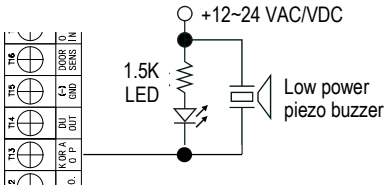


**NOTE:** Only one connection option shown above is recommended. Make sure that the sink current does not exceed the maximum rating of 100mA.

## Sample Applications for Auxiliary Terminals (Continued)

### Key Active Output

Set the K or A jumper to "K" (see *Jumper Settings*, pg. 8) to cause the *key active output* to switch to ground (–) for 10 seconds whenever a key is touched. You may use it to turn on an LED lamp and for a small buzzer to notify a guard, or to energize a relay to switch on lights or trigger a CCTV camera to start recording.
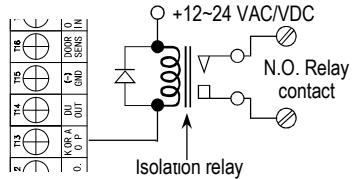


### NOTES:

- Make sure that the relay for switching on lights has high enough isolation between high voltage and low voltage to prevent damage to the keypad.
- Only one connection option shown above is recommended. Make sure the sink current does not exceed the maximum rating of 100mA.
- External power supply and isolation relay are strictly necessary in driving a high-power device, such as lights.

## Getting Ready to Program

### Codes or Cards

The keypad can be set to be activated by users in one of three ways.

1. **Keypad code only** – There are five types of keypad codes

    - *Master code* – Used only for entering programming mode; there can be only one *master code* per keypad.
    - *Super user code* – Can be used to activate outputs 1, 2, and 3, or to disable (inhibit) or enable the operation of the outputs.
    - *User codes* – Unique codes for each user to activate outputs 1, 2, or 3.
    - *Visitor codes* – Temporary user codes that can be assigned to visitors or temporary workers to activate output 1; the *visitor code*s can be programmed for one-time use or to expire after a set number of hours has passed.
    - *Duress codes* – Assigned to specific users as a way to send a silent alert if forced to use keypad under duress

2. **Proximity card only** – Standard 125kHz (EM125) proximity cards can be used to activate outputs 1, 2, or 3.

3. **Card + code** – For enhanced security, the user can be required to also enter a code after tapping a proximity card. The code may be unique to each card or to a group of users, or a common code can be used with all cards.

## Getting Ready to Program (Continued)

### Security Levels

There are four possible security levels for the keypad.

1. **Card only** – The most basic, convenient level of security. Hold a previously programmed proximity card over the keypad to activate outputs 1, 2, or 3 (see *Programming User Codes and Proximity Cards* on pg. 19).
2. **User code only** – Type in a 4- to 8-digit user code to activate outputs 1, 2, or 3 (see pg. 19).
3. **Card +** *common user code* – All valid proximity cards can be programmed with a *common user code* so that outputs 1, 2, or 3 can only be activated if a card and the *common user code* are used together. The *common user code* is automatically assigned when each proximity card is programmed into the keypad (see *Programming Common User Codes* on pg. 18).
4. **Card + unique user code** – The most secure level. Each proximity card can be programmed with its own *unique user code* so that outputs 1, 2, or 3 can only be activated if the card and the unique code are used together (see pg. 19).

### Power Up the Keypad

When the keypad is first powered up, it will beep continuously for about 1 minute. During this power-up time, if needed, use *direct access to programming (DAP)* to reset the *master code* (see *Direct Access to Programming* on pg. 33).

1. Turn off the beeping before the 1-minute power-up period ends

   [1] [2]   [#]
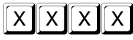
   This will immediately stop the beeping. When the beeping has ended, the keypad is ready for normal operation or for programming.

### Enter and Exit Programming Mode

All programming of the keypad is done in *programming mode*.

1. Enter *programming mode*.

   [X] [X] [X] [X]   [*] [*]

   **NOTE:** In the formula above, [X] [X] [X] [X] represents the *master code*. The default *master code* is "0000" (see *Programming the Master Code* on pg. 15 to program a new *master code*). The amber LED will change to steady ON to indicate that the keypad is in *programming mode*.

2. Exit programming mode.

   [*] [*]

   The [*] [*] entry can be used to exit *programming mode* at any time while programming. The amber LED will return to flashing, indicating *standby mode*, upon exiting *programming mode*.

   **NOTE: DO NOT DISCONNECT THE KEYPAD FROM POWER WHILE IN PROGRAMMING MODE**. Doing so could cause a keypad memory error.

## Programming Format and Default Programming Values

In this manual, the format used for programming the keypad is as follows.

- A 2-digit ( X X ) FUNCTION identifier to tell the keypad what is being programmed.
- A varying number of digits ( X ) represents the parameters of that FUNCTION.
- Press the # key to confirm programming of the FUNCTION.

The following is a list of the different programming functions.

| Function | Parameters | Default functions and values | Page # |
|----------|------------|-------------------------------|--------|
| 01 | Master code | Default 0000, code length from 4~8 digits | 15 |
| 02 | Super user code | No default, must be programmed | 16 |
| 03 | Common user code for output 1 | No default, must be programmed | 18 |
| 04 | Common user code for output 2 | No default, must be programmed | 18 |
| 05 | Common user code for output 3 | No default, must be programmed | 18 |
| 10 | User codes/cards for output 1 | No default, must be programmed | 18 |
| 20 | User codes/cards for output 2 | No default, must be programmed | 18 |
| 30 | User codes/cards for output 3 | No default, must be programmed | 18 |
| 40 | Visitor codes for output 1 | No default, must be programmed | 21 |
| 41 | Duress codes for output 1 | No default, must be programmed | 22 |
| 42 | Duress codes for output 2 | No default, must be programmed | 22 |
| 43 | Duress codes for output 3 | No default, must be programmed | 22 |
| 51 | Output mode/duration for output 1 | 5-Second output, momentary | 24 |
| 52 | Output mode/duration for output 2 | 5-Second output, momentary | 24 |
| 53 | Output mode/duration for output 3 | 5-Second output, momentary | 24 |
| 55 | System real-time clock | No default, must be programmed | 25 |
| 56 | Auto-disable time, output 1 | No default, must be programmed | 26 |
| 60 | Wrong-code system lock-up | Locks keypad after 10 false code/card tries | 27 |
| 70 | User code entry mode | Manual entry of "#" after each code | 28 |
| 71 | Keypad sounds | Programming and operation beeps enabled | 28 |
| 72 | Output relay activation sounds | 1-Second beep when output is activated | 29 |
| 73 | Amber LED standby flashing | Center LED flashes on standby | 29 |
| 80 | Door-forced-open warning | Warning disabled | 30 |
| 81 | Door-propped-open warning | Warning disabled | 29 |
| 90 | Egress delay/warning/alarm | Egress output happens immediately | 31 |
| 91 | Door open warning/duration | Alarm output is disabled | 30 |
| 92 | Keypad operation mode | Stand-alone mode | 32 |
| 93 | Wiegand data output format | 26-Bit Wiegand data output | 33 |

**NOTE** The *direct access to programming (DAP)* code 2828 (see pg. 33) and the system restore code 9999 (see pg. 15) are fixed and cannot be changed, even via programming.

## System Restore

System restore will reset all programming values except the *master code* back to the default values shown on pg. 14.

1.  Make sure the keypad is in *programming mode* (see *Enter and Exit Programming Mode* on pg. 13).

2.  Initiate system restore.

    | 9 | 9 | 9 | 9 | | # |

**NOTES**

*   System restore will reset ALL programming except the *master code* back to default values. Be careful to use system restore only when absolutely necessary.
*   System restore may take several minutes. The amber LED will flash rapidly during this time.
*   Once system restore has been completed, the keypad will beep twice to show that all programming values have been reset to their default values and are ready to be reprogrammed.
*   At this point, the keypad is still in *programming mode*.

## Programming the Master Code

The *master code* is used to enter *programming mode*. The *master code* **does not** serve as a user code for activating outputs 1, 2, or 3.

1.  Make sure the keypad is in *programming mode* (see *Enter and Exit Programming Mode* on pg. 13).

2.  Enter new *master code*.

    | 0 | 1 | | X | X | X | X | | # |

**NOTES**

*   X X X X represents the new *master code*, which can be 4 to 8 digits long.
*   There can be **only one *master code*** for the keypad.
*   Programming a new *master code* will overwrite the previous *master code*.
*   If the *master code* is forgotten, use *direct access to programming (DAP)* to reset the *master code* (see pg. 33).
*   The *master, super user, common user, visitor, duress*, and *user codes* **cannot be the same**.
*   If the keypad is set for *auto code entry* mode, all codes will need to be the **same number of digits** as the *master code* (see *Programming User Code Entry Mode* on pg. 28).

## The Super User Code

The *super user code* has multiple functions.

- The *super user code* can activate or deactivate output 1, 2, or 3 at any time.
- The *super user code* can toggle operation of output 1 on or off.
- The *super user code* can pause or restart the timed output 1 auto-disable period.
- The *super user code* can also enable or disable output 1. An administrator may want to disable the output in the evening or on the weekend to prevent other users from entering a protected area.

The *super user code* is exempt from system inhibition or lockup functions and is valid at any time.

### Programming the Super User Code

1. Ensure the keypad is in *programming mode* (see *Enter and Exit Programming Mode*, pg. 13).

2. Enter the new *super user code*.

   [0][2]    [X][X][X][X]    [#]

### NOTES

- [X][X][X][X] represents the new *super user code*, which can be 4 to 8 digits long.
- There can be **only one *super user code*** for the keypad.
- Programming a new *super user code* will overwrite the previous *super user code*.
- The *master, super user, common user, visitor, duress*, and *user codes* **cannot be the same**.

### Deleting the Super User Code

This function is useful for protecting the premises in case the *super user code* is lost or forgotten.

To delete a *super user code*.

1. Make sure the keypad is in *programming mode* (see pg. 13).

2. Enter

   [0][2]    [#]

# The Super User Code (Continued)

## Using the Super User Code

In these examples, assume the *super user code* is 2580.

1. Activate or deactivate output 1 (timed or toggle, depending on programming).

   ⊡2 ⊡5 ⊡8 ⊡0    ⊡#    ⊡1

2. Activate or deactivate output 2 (timed or toggle, depending on programming).

   ⊡2 ⊡5 ⊡8 ⊡0    ⊡#    ⊡2

3. Activate or deactivate output 3 (timed or toggle, depending on programming).

   ⊡2 ⊡5 ⊡8 ⊡0    ⊡#    ⊡3

4. Toggle operation of output 1 ON or OFF.

   ⊡2 ⊡5 ⊡8 ⊡0    ⊡#    ⊡7

   **NOTES**
   - This function is used to leave output 1 active for extended periods of time.
   - Do not forget to deactivate this function after its use is no longer required.
   - It is recommended to use this function only with fail-safe locks. Fail-secure locks may be damaged by staying activated for too long.
   - All functions requiring use of the door sensor input are suspended while this function is in use.

5. To temporarily pause or restart the timed output 1 auto-disable period.

   ⊡2 ⊡5 ⊡8 ⊡0    ⊡#    ⊡8

   **NOTES**
   - This function is used to enable the operation of output 1 if it was disabled using the *auto-disable* function (see pg. 26).
   - When the output 1 auto-disable function is inactive, the red LED will flash steadily. This indicates that output 1 may now be used.

6. Disable or enable output 1 (toggle, regardless of programming).

   ⊡2 ⊡5 ⊡8 ⊡0    ⊡#    ⊡9

   **NOTES**
   - This is used to prevent users from accessing the protected premises.
   - For more information on programming timed or toggle mode, see *Programming Output Mode and* Duration on pg. 23.
   - The left LED will remain steady red while output 1 is disabled.
   - For safety reasons, the egress button works regardless of whether output 1 is enabled or disabled via the *super user code*.
   - The *super user code* continues to operate output 1 even while that output is disabled.

---

## Programming Common User Codes

**NOTE:** This function is only used when utilizing proximity cards. For programming user codes, see pg. 19.

This function allows a *common user code* to be automatically added to each proximity card as it is programmed. Every proximity card user also uses the same *common user code* to operate outputs 1, 2, or 3. This provides greater security than programming the keypad to operate with the card alone. It is also more convenient than assigning each user a *unique user code*, although *unique user codes* offer an even greater degree of security.

1. To program a *common user code* for output 1.

   `0` `3`   `X` `X` `X` `X`   `#`

2. To program a *common user code* for output 2.

   `0` `4`   `X` `X` `X` `X`   `#`

3. To program a *common user code* for output 3.

   `0` `5`   `X` `X` `X` `X`   `#`

4. To delete the *common user code* for output 1

   `0` `3`   `#`

**NOTES**

- `X` `X` `X` `X` represents the new *common user code*, which can be 4 to 8 digits long.
- Programming a new *common user code* will overwrite the previous *common user code*.
- A *common user code* is not necessary if unique user codes are assigned.
- The *master, super user, common user, visitor, duress*, and *user codes* cannot be the same.

## Programming User Codes and Proximity Cards

When programming *user codes* and/or *user cards*, use this general formula.

$\boxed{A}\boxed{A}$  $\boxed{B}$  $\boxed{C}\boxed{C}\boxed{C}$  $\boxed{D}\boxed{D}\boxed{D}\boxed{D}$  $\boxed{\#}$

$\boxed{A}$ – Output

$\boxed{B}$ – Security level (or $\boxed{5}$, to delete a *user code* or *card*)

$\boxed{C}$ – *User ID*

$\boxed{D}$ – *User code / user card*

### Outputs

- $\boxed{1}\boxed{0}$ – Output 1, up to 1,000 possible user codes and/or *user cards*
- $\boxed{2}\boxed{0}$ – Output 2, up to 100 possible *user codes* and/or *user cards*
- $\boxed{3}\boxed{0}$ – Output 3, up to 100 possible *user codes* and/or *user cards*

### Security Levels and Card/Code Deletion

There are four possible security levels for the keypad.

- $\boxed{1}$ **Card only** – The most basic, convenient level of security. Just tap a previously-programmed *user card* over the keypad to activate outputs 1, 2, or 3.

    **NOTE:** The *duress code* feature cannot be used with the keypad programmed to the "card only" security mode. However, a *duress code* can be entered instead of a card.

- $\boxed{2}$ **User code only** – Type in a 4 to 8-digit *user code* to activate outputs 1, 2, or 3.

- $\boxed{3}$ **Card + unique user code** – The most secure level. This code is programmed separately for each *card* and can be unique to the *card*, or the same *code* can be used for a group or department. The *card* and *code* must be used together to operate the output.

- $\boxed{4}$ **Card + *common user code*** – All valid *user cards* can be programmed with a single *common user code* so that outputs 1, 2, or 3 can only be activated if one of the *cards* and the *common user code* are used together. The *common user code* is automatically assigned as each *user card* is programmed into the keypad.

- $\boxed{5}$ – Delete a programmed *user card* or *user code*.

- $\boxed{0}\boxed{9}\boxed{9}\boxed{9}$ – Delete all programmed *user cards* or *codes* for the selected output.

## Programming User Codes and Proximity Cards (Continued)

### User IDs

- `0` `0` `0` to `9` `9` `9` – 1,000 unique *user IDs* for *user codes* and *cards* for output 1
- `0` `0` `1` to `1` `0` `0` – 100 unique *user IDs* for *user codes* and *cards* for output 2
- `0` `0` `1` to `1` `0` `0` – 100 unique *user IDs* for *user codes* and *cards* for output 3

### User Codes

- A *user code* can be 4 to 8 digits long and must have the same length as the *master code* if the keypad is used in *auto entry mode* (see *Programming User Code Entry Mode* on pg. 28).
- The *master, super user, common user, visitor, duress,* and *user codes* **cannot be the same**.

### Examples

1. Program only a *user card* for *user ID* #017 for output 1.

   `1` `0`   `1`   `0` `1` `7`   **READ CARD**   `#`

2. Program *user code* 2275 for *user ID* #010 for output 1.

   `1` `0`   `2`   `0` `1` `0`   `2` `2` `7` `5`   `#`

3. Delete a *user card* for output 1

   `1` `0`   `5`   **READ CARD**   `#`

4. Delete *code* or *card* for *user ID* #002 for output 1.

   `1` `0`   `5`   `0` `0` `2`   `#`

5. Delete all users for output 1.

   `1` `0`   `0` `9` `9` `9`   `#`

6. Program a *user card* for *user ID* #001 for output 1 for use with a *common user code*.

   `1` `0`   `4`   `0` `0` `1`   **READ CARD**   `#`

   **NOTE:** A *common user code* must already be programmed to the output (see pg. 18).

7. Program a *user card* for *user ID* #023 for output 2 for use with a *unique user code* 2468.

   `2` `0`   `3`   `0` `2` `3`   **READ CARD**   `2` `4` `6` `8`   `#`

## Programming Visitor Codes

*Visitor code*s are temporary codes that expire after use or after a specified amount of time has elapsed. While active, they operate output 1 as normal *user codes*.

### NOTES

- *Visitor codes* cannot be used to deactivate the duress output (see *Operating Duress Codes* on pg. 23).
- If a *visitor code* is programmed using a number previously programmed as a *user code*, the *visitor code* will be kept and the *user code* will be replaced.
- If the keypad is powered down, any programmed *visitor codes* will be deleted.

When programming *visitor codes*, use this general formula.

[4][0]　[A][A]　[B][B]　[C][C][C][C]　[#]

[4][0] – Program *visitor code*s

[A] – Visitor ID

[B] – Valid duration (hours)

[C] – *Visitor code*

### Visitor IDs

- [0][1] to [5][0] – 50 unique visitor IDs for *visitor codes* for output 1
- [0][9][9][9] – Delete all currently programmed *visitor codes*.

### Valid Duration

- [0][0] – Set a one-time code. This code can only be used once by a visitor, after which it is automatically deleted.
- [0][1] to [9][9] – Set the duration the *visitor code* will be valid, from 1 to 99 hours.

### Visitor Codes

- A *visitor code* can be 4 to 8 digits long and must have the same length as the *master code* if the keypad is used in auto entry mode (see *Programming User Code Entry Mode* on pg. 28).

### Examples

1. Set the visitor ID #1 code to 1268 and make it a one-time code.

   [4][0]　[0][1]　[0][0]　[1][2][6][8]　[#]

2. Set the visitor ID #2 code to 1378 and make it valid for three hours.

   [4][0]　[0][2]　[0][3]　[1][3][7][8]　[#]

3. Delete the visitor ID #2 code from memory.

   [4][0]　[0][2]　[#]

4. Delete all currently programmed *visitor codes*.

   [4][0]　[0][9][9][9]　[#]

## Programming Duress Codes

*Duress codes* allow users to trigger a silent alarm or alert if forced to allow access to a protected area. If a user uses a *duress code* instead of their normal user code, outputs 1, 2, or 3 will activate as normal, but the duress output will simultaneously activate to trigger a silent alarm or alert.

### NOTES

- *Duress codes* are always valid and are not inhibited by any other operation of the keypad.
- *Duress codes* cannot be the same as any other codes.
- *Duress codes* can be used either as stand-alone codes or in conjunction with a user card, depending on how the user codes are programmed (see *Programming User Codes and Proximity Cards* on pg. 19).
- The *duress code* should be easy to remember. For instance, it can be the same as a user's normal user code, but with a single digit changed, such as subtracting or adding 1 to the first or last digit of the code. For example, if the user code is 1369, a good *duress code* might be 2369.

When programming *duress codes*, use this general formula.

$\boxed{A}\boxed{A}$ $\quad$ $\boxed{B}\boxed{B}$ $\quad$ $\boxed{C}\boxed{C}\boxed{C}\boxed{C}$ $\quad$ $\boxed{\#}$

$\boxed{A}$ – Output

$\boxed{B}$ – Duress ID

$\boxed{C}$ – *Duress code*

### Outputs

- $\boxed{4}\boxed{1}$ – Output 1
- $\boxed{4}\boxed{2}$ – Output 2
- $\boxed{4}\boxed{3}$ – Output 3

### Duress IDs

- $\boxed{0}\boxed{1}$ to $\boxed{5}\boxed{0}$ – Up to 50 duress IDs can be programmed for output 1.
- $\boxed{0}\boxed{1}$ to $\boxed{1}\boxed{0}$ – Up to 10 duress IDs can be programmed for output 2.
- $\boxed{0}\boxed{1}$ to $\boxed{1}\boxed{0}$ – Up to 10 duress IDs can be programmed for output 3.

### Duress Codes

- A *duress code* can be 4 to 8 digits long and must have the same length as the *master code* if the keypad is used in auto entry mode (see *Programming User Code Entry Mode* on pg. 28).

### Examples

1. Set a *duress code* for ID #01 for output 1 to 2369.

   $\boxed{4}\boxed{1}$ $\quad$ $\boxed{0}\boxed{1}$ $\quad$ $\boxed{2}\boxed{3}\boxed{6}\boxed{9}$ $\quad$ $\boxed{\#}$

2. Set a *duress code* for ID #01 for output 2 to 23980.

   $\boxed{4}\boxed{2}$ $\quad$ $\boxed{0}\boxed{1}$ $\quad$ $\boxed{2}\boxed{3}\boxed{9}\boxed{8}\boxed{0}$ $\quad$ $\boxed{\#}$

## Programming Duress Codes (Continued)

3. Delete the *duress code* for ID #01 for output 1 from memory.

   [4] [1]    [0] [1]    [#]

4. Delete all *duress code*s for output 1 from memory.

   [4] [1]    [0] [9] [9] [9]    [#]

### Operating Duress Codes

If a *duress code* is used in place of a normal *user code*, both the appropriate outputs 1 or 2 and the duress output will be activated. However, a *duress code* **cannot** deactivate the duress output.

Only a **normal *user code/card***, ***super user code***, or ***master code*** can deactivate the duress output.

**NOTE:** A *duress code* can also be used in conjunction with a *user card* to activate the duress output. However, a *user card* alone cannot activate the duress output.

### Examples

In these examples, assume that 2369 is an output 1 *duress code* and that 1369 is an output 1 *user code*.

1. Activate the duress output and output 1 using the *duress code*:

   [2] [3] [6] [9]    [#]

   **NOTE:** Subsequently entering the *duress code* will activate output 1 again but will not deactivate the duress output.

2. Deactivate the duress output using the *user code*.

   [1] [3] [6] [9]    [#]

3. Activate the duress output and activate output 1 using the *duress code* and a *user card*.

   *READ CARD*    [2] [3] [6] [9]    [#]

## Programming Output Mode and Duration

The relay for the outputs 1, 2, and 3 can be programmed to trigger ON and OFF with a user code or user card (toggle mode), or to trigger for a programmed length of time of up to nearly 28 hours before automatically turning OFF. The toggle or timed outputs can be used for locking or unlocking a door or for a variety of functions that can be controlled with the keypad.

When programming the *output mode and time*, use this general formula.

A A　　B B B B B　　#

A –Output

B – *Output mode and duration*

### Outputs

- 5 1 – Output 1
- 5 2 – Output 2
- 5 3 – Output 3

### Output Mode and Duration

- 0 – Start/stop (toggle) mode. In this case, the output starts when a user code and/or user card is entered and stops when a user code and/or user card is entered.
- 1 to 9 9 9 9 9 – The output triggered by a user code and/or user card lasts 1 to 99,999 seconds (nearly 28 hours) before automatically turning off (default 5 seconds).

**NOTE:** While the keypad is in momentary timed output mode, the output can be reset any time by entering the *super user code*.

### Examples

In these examples, assume that the *super user code* is 2580.

1. In *programming mode*, set output 1 to toggle.

   5 1　　0　　#

2. In *programming mode*, set output 2 to 60 seconds.

   5 2　　6 0　　#

3. Reset output 1 timer.

   2 5 8 0　　#　　1

4. Reset output 2 timer.

   2 5 8 0　　#　　2

5. Reset output 3 timer.

   2 5 8 0　　#　　3

## Programming the Real-Time Clock

A 24-hour real-time clock provides the baseline time needed to start and stop the output 1 *auto-disable time* (see *Programming Auto-Disable Time* on pg. 26).

If the output 1 *auto-disable time* is not programmed, it is not necessary to set the *real-time clock*.

To set the clock, use this general formula.

| 5 | 5 | | H | H | M | M | | # |

| 5 | 5 | – Program *real-time clock*

| H | H | – Hours

| M | M | – Minutes

### Setting Hours and Minutes

- | H | H | represents hours and | M | M | represents minutes in the military (24-hour) time format, from 00:00 to 23:59.

### Examples

1. Set the real-time clock to 11:30 AM.

| 5 | 5 | | 1 | 1 | 3 | 0 | | # |

2. Set the real-time clock to 7:15 PM.

| 5 | 5 | | 1 | 9 | 1 | 5 | | # |

### NOTES

- To ensure accurate time, it is advised to re-program the *real-time clock* every three to six months and when Daylight Savings Time begins and ends (if applicable).
- If the *auto-disable time* is programmed, losing power will cause the keypad to beep 3 times every 5 seconds. To deactivate this alert, either reset the *real-time clock* or clear the *auto-disable time*.
- If the *auto-disable time* is not programmed, losing power will not cause the keypad to beep.

## Programming Auto-Disable Time

The keypad can be programmed so that output 1 is disabled for a certain period every day. Output 1 will be disabled at the start time and will be re-enabled at the end time. This ensures that users are not allowed into the protected premises, such as during lunch hour or at night.

### NOTES

- The *real-time clock* must be operating to set the output *auto-disable time* (see *Programming the Real-Time Clock* on pg. 25).
- For safety purposes, the egress button still works while output 1 is auto-disabled.
- The time is set using the military (24-hour) time format (00:00 to 23:59).
- If the programmed start time is before the end time, output 1 is auto-disabled within a single day. If the programmed start time is after the end time, the end time will be on the following day.
- The start time and end time cannot be the same.
- The *auto-disable time* can be temporarily paused and restarted using the *super user code* (see *Programming the Super User Code* on pg. 16).
- During the *auto-disable time*, the *super user code* can be used to operate output 1.
- The red LED will remain lit during the *auto-disable time*.

When programming the *auto-disable time*, use this general formula.

[5][6]    [H][H][M][M]    [H][H][M][M]    [#]

[5][6] – Program *auto-disable time* for output 1

[H][H][M][M] – Start time

[H][H][M][M] – End time

### Start Time

- Start time for the *auto-disable time*. [H][H] represents hours and [M][M] represents minutes in the military (24-hour) time format, from 00:00 to 23:59.

### End Time

- End time for the *auto-disable time*. [H][H] represents hours and [M][M] represents minutes in the military (24-hour) time format, from 00:00 to 23:59.

### Examples

In these examples, assume that the *super user code* is 2580.

1. In *programming mode*, set the *auto-disable time* from 12:00 PM to 1:00 PM.

   [5][6]    [1][2][0][0]    [1][3][0][0]    [#]

2. In *programming mode*, set the *auto-disable time* from 6:30 PM to 7:30 AM the following day.

   [5][6]    [1][8][3][0]    [0][7][3][0]    [#]

## Programming Auto-Disable Time (Continued)

3. In *programming mode*, clear the *auto-disable time*.

   [5] [6]  [#]

4. Temporarily pause or resume the *auto-disable time*.

   [2] [5] [8] [0]  [#]  [8]

5. Activate output 1 during the *auto-disable time* (i.e., open the protected door).

   [2] [5] [8] [0]  [#]  [1]

---

## Programming Wrong-Code System Lockup

The keypad can be programmed to lock up to secure the premises against unauthorized entry if multiple wrong codes are entered or multiple wrong cards are tapped.

When programming the *wrong-code system lockup*, use this general formula.

[6] [0]  [A] [A]  [#]

[6] [0] – Program *wrong-code system lockup*

[A] [A] – Lock options

### Lock Options
Choose from several different options for the *wrong-code system lockup* security level.

- [1] – After 10 successive false attempts using incorrect *user codes* or *user cards*, the keypad will lock for 60 seconds (default).
- [2] – After 10 successive false attempts using incorrect *user codes* or *user cards*, the duress output will activate. The duress output can be deactivated using any output 1 *user code* or *user card*, or via the *super user code*.
- [5] to [1] [0] – After 5 to 10 successive false attempts using incorrect *user codes* or *user cards*, the keypad will lock for 15 minutes or until the *super user code* is used as follows.

  *SUPER USER CODE*  [#]  [9]
- [0] [0] – No system lock-up will happen.

### NOTES
- The keypad's red LED will remain lit to show that the keypad is locked.
- The *duress code* will still function in this mode.

## Programming User Code Entry Mode

The keypad can be programmed for auto or manual user code entry modes.

- **Auto-entry mode** – Pressing the ⌗ key is not required after typing in a *user code*. In *auto entry mode*, all *user codes* must have the same number of digits as the *master code*.

- **Manual-entry mode** – The ⌗ key must be pressed after the *user code* to indicate the code has been entered completely. In this case, the *user codes* can have a different number of digits, from 4 to 8 digits.

### To Program

- For *auto-entry mode*

  | 7 | 0 |   | 1 |   | # |

- For *manual-entry mode* (default)

  | 7 | 0 |   | 2 |   | # |

**NOTE:** If the keypad was previously programmed for *manual-entry mode* and then is reprogrammed for *auto-entry mode*, any codes whose length exceeds the number of digits of the *master code* will no longer operate the keypad. However, if the keypad is reprogrammed for *manual-entry mode*, the longer codes will again operate the keypad.

## Programming Keypad Sounds

Some of the keypad sounds can be programmed off.

- **Keypad-audible mode** – All the keypad's status beeps are enabled.
- **Keypad-silent mode** – The successful key entry beep (1 beep) and the unsuccessful *user code* or *card* entry beeps (5 beeps) are disabled. However, the warning and power-up delay beeps remain active. This provides for a quieter work environment.

### To Program

- To enable *keypad-audible mode* (default)

  | 7 | 1 |   | 1 |   | # |

- To enable *keypad-silent mode*

  | 7 | 1 |   | 0 |   | # |

**NOTE:** This programming function only impacts the keypad sounds. It does not impact the *output relay-activation sounds* (see *Programming Output Relay-Activation Sounds* on pg. 29).

## Programming Output Relay-Activation Sounds

The keypad output sounds can be programmed for one of three modes.

1. **No beeps** – The keypad will not beep when the output is activated.

   `7` `2`   `0`   `#`

2. **1-second beep** (default) – The keypad will beep for 1 second when the output is activated.

   `7` `2`   `1`   `#`

3. **2 short beeps** – The keypad will beep twice when the output is activated.

   `7` `2`   `2`   `#`

**NOTE:** This programming function only impacts the *output relay-activation sounds*. It does not impact the keypad sounds (see *Programming Keypad Sounds* on pg. 28).

## Programming the Amber LED in Standby

The keypad's amber LED typically flashes while the keypad is in *standby mode* but can be programmed off if needed.

1. Enable amber LED flashing during *standby mode* (default).

   `7` `3`   `1`   `#`

2. Disable amber LED flashing during *standby mode*.

   `7` `3`   `0`   `#`

## Programming Door-Propped-Open Warning/Delay

If the keypad is connected to an optional magnetic contact or other door protection switch or device, the keypad can be programmed to beep after a set delay when a door has been propped open. This prompts authorized users to close a door that was not closed properly or to investigate a door that may have been deliberately propped open.

1. *Door-propped-open warning* OFF (default).

   `8` `1`   `0`   `#`

2. *Door-propped-open warning* ON and delay duration.

   `8` `1`   `T` `T` `T`   `#`

### NOTES

- `T` `T` `T` represents the delay duration, which can be set from 1 to 999 seconds.
- The delay time provides time for a door to close normally before triggering the *door-propped-open warning*.
- The *door-propped-open warning* beeping will stop when the open door is closed.
- The alarm output **cannot** be programmed to operate with the *door-propped-open* feature.

## Programming Door-Forced-Open Warning/Duration

If the keypad is connected to an optional magnetic contact or other door status switch or device, it can be programmed to beep and output to an alarm (1~999 sec) if a door has been forced open.

1. *Door-forced-open warning* OFF (default)

   | 8 | 0 |   | 0 |   | # |

2. *Door-forced-open warning* ON and duration

   | 8 | 0 |   | T | T | T |   | # |

**NOTES**

- | T | T | T | represents the beep/alarm active duration, which can be set from 1 to 999 seconds.
- If programmed for *door-forced-open warning*, the keypad will beep and output to an alarm if the door is forced open without using a user code and/or card or the egress button. The keypad will not do so if the door is opened with a user code and/or card or the egress button.
- Do not enable both the *door-open warning* and *door-forced-open warning*. The overlap in timing could result in incorrect alarm output (see *Programming Door-Open Warning/Duration*, below)
- The "K or A" jumper must be set to "A" for the alarm output to function correctly (see *Jumper Settings*, pg. 8)

## Programming Door-Open Warning/Duration

If the keypad is connected to a magnetic contact or other door monitoring device, it can be programmed to trigger the alarm output for 1~999 seconds if the door is forced open without using a valid *user code*/*card* or is opened with the egress button. The alarm will not be activated if the door is opened with a valid *user code/card*. If triggered, the output automatically ends either at the end of the programmed time or when a valid *user code* or *super user code* is input for output 1.

### To Program

1. *Door-open warning* OFF (default)

   | 9 | 1 |   | 0 |   | # |

2. *Door-open warning* ON and set duration

   | 9 | 1 |   | T | T | T |   | # |

**NOTES**

- | T | T | T | represents the alarm output duration, which can be set from 1 to 999 seconds.
- If programmed for *door-open warning*, the alarm will activate for the programmed duration if the door is forced open without a valid *user code* and/or *card* bit will not activate if the door is opened with a valid *user code* and/or *card*.
- The *door-open warning* and *door-forced-open warning* should not both be enabled, as the overlap in timing could result in incorrect alarm output (see *Programming Door-Forced-Open Warning/*Duration, pg. 30)
- The "K or A" jumper must be set to "A" for the alarm output to function correctly (see *Jumper Settings*, pg. 8)

## Programming Egress Delay/Warning/Alarm

With most keypads, the egress button provides a simple way for someone inside a protected area to exit through a locked door by pressing a button instead of using a keypad. However, in some situations, delaying the egress operation and/or providing some warning when the egress button is used is desirable.

For example, in hospitals or schools, it may be desirable to delay the egress operation and provide a warning to prevent patients or young children from easily leaving the protected area.

For simple egress with no delay or warning, do not change this setting. It is disabled by default.

When programming the egress delay/warning/alarm, use this general formula.

| 9 | 0 |   | A |   | B | B |   | # |

| 9 | 0 | – Program egress delay/warning

| A | – Egress mode

| B | B | – Delay time

### Egress Modes

There are six possible egress operation configurations.

- | 1 | **Momentary contact with no warning** (default) – Press the egress button momentarily for silent egress operation immediately or after the programmed delay with no audible warning.

- | 2 | **Momentary contact with warning beep** – Press the egress button momentarily. The keypad will beep for the programmed delay duration to warn that someone is preparing to exit the protected area before allowing the door to open.

- | 3 | **Momentary contact with warning beep and alarm** – Press the egress button momentarily. The keypad will beep and activate the alarm output for the programmed delay duration to warn that someone is preparing to exit the protected area before allowing the door to open.

- | 4 | **Hold contact with no warning** – Press and hold the egress button for the programmed delay duration until the door opens. This prevents accidental opening of the door.

- | 5 | **Hold contact with warning beep** – Press and hold the egress button for the programmed delay duration until the door opens. The keypad will beep during the delay to warn that someone is preparing to exit the protected area before allowing the door to open.

- | 6 | **Hold contact with warning beep and alarm output** – Press and hold the egress button for the programmed delay duration until the door opens. The keypad will beep and activate the alarm output during the delay to warn that someone is preparing to exit the protected area before allowing the door to open.

**NOTE:** When the egress button is programmed to hold for a delay time before the door is released, it is important to **post a sign near the egress** button to notify users of the delay time.

## Programming Egress Delay/Warning/Alarm (Continued)

### Delay Time

- 0 – No delay (default) – Output 1 operates immediately when the egress button is pressed.
- 1 to 99 – Egress button delay duration – Can be set from 1 to 99 seconds to tell the keypad how long to wait after the egress button is pressed before activating output 1.

### Examples

1. Momentary – 5-second warning before output 1 activates.
   90   2   5   #

2. Hold button with warning – Must press and hold the egress button for 10 seconds and the keypad will beep for those 10 seconds before output 1 activates.
   90   5   10   #

3. Return to default setting – Press the egress button to activate output 1 with no beep or delay.
   90   1   0   #

**NOTE: For safety and to avoid confusion, when a delay or a press-and-hold delay is programmed, please post a notice near the egress button, such as "Press and hold the button for 5 seconds or until the door is unlocked."**

## Wiegand Output Setup

b

### Wiegand Wiring Harness

Plug the Wiegand Wiring Harness into the PCB (see pg. 8) and connect the wires as follows.

| | |
|---|---|
| **D1 (Red)** | D1 Wiegand data output – Connect to the D1 port of the controller |
| **D0 (Black)** | D0 Wiegand data output – Connect to the D0 port of the controller |
| **BUZ (Brown)** | Buzzer control – Connect to the buzzer output port of the controller |
| **LED (Yellow** | LED Control – Connect to the LED output port of the controller |
| **GND (Blue)** | (–) Common ground – Connect to the GND port of the controller |
| **(White)** | Empty, no connection |

### Setting the Keypad Operation Mode

When programming the keypad operation mode, use this general formula.

92   A   #

92 – Program keypad operation mode

A – Operation mode

### Operation Modes

There are two possible operation modes.

- 1 Standalone mode (default)
- 4 Wiegand reader mode

## Wiegand Output Setup (Continued)

**Setting Wiegand Data Output Format**

When programming the Wiegand data output format, use this general formula.

9 3    A    #

9 3 – Program Wiegand data output format

A – Data output format

### Operation Modes

There are two possible operation modes.

- 1 26-Bit Wiegand data output (default)
- 2 34-Bit Wiegand data output
- 3 37-Bit Wiegand data output

## Direct Access to Programming

Direct Access to Programming (DAP) is used to reset the *master code* if it is forgotten. DAP will not change the programming of the keypad in any other way.

**To Use DAP**

1. Disconnect the keypad's power.
2. Wait one minute to ensure that the keypad's power is fully discharged.
3. Reconnect the power. The keypad will beep repeatedly for one minute.
4. While the keypad is beeping, press the egress button once to stop the beeping.

   **NOTE:** If no egress button is installed, use a small jumper wire to momentarily connect the egress input and common ground terminals.

5. Enter the DAP code.

   2 8 2 8    * *

6. The amber LED will now turn ON, indicating that the keypad is ready for a new *master code* to be programmed.

**NOTES**

- See *Programming the* Master *Code* on pg. 15 for how to program a new *master code*.
- *Direct access to programming* (DAP) will not reset the keypad's programming. It will only enter *programming mode* to program a new *master code*.
- For a complete system reset, see *System Restore* on pg. 15.

## Users' Guide to Operating the Keypad

See *Programming the Master Code* on pg. 15 and *Programming the Super User Code* on pg. 16 for functions specific to those authorized to use those codes.

### Opening the Door

In these examples, assume that the *user code* is 2275, the *common user code* is 3526, and a *unique user code* is 2468.

- **Security level 1** – card only
  **READ CARD**
  One long beep indicates that the door can be opened.

- **Security level 2** – code only
  [2] [2] [7] [5]    [#] *
  One long beep indicates that the door can be opened.

- **Security Level 3** – Card + *common user code*
  **READ CARD**
  Two short beeps and a rapidly flashing amber LED indicates the card is accepted and the keypad is waiting for the *common user code*.
  [3] [5] [2] [6]    [#] *
  One long beep indicates that the door can be opened.

- **Security Level 4** – Card + *unique user code*
  **READ CARD**
  Two short beeps and a rapidly flashing amber LED indicates the card is accepted and the keypad is waiting for the *user code*.
  [2] [4] [6] [8]    [#] *
  One long beep indicates that the door can be opened.

**NOTE:** For more information on security levels, please see *Getting Ready to Program* on pg. 12.

### Operating the Egress Button

Press the egress button from inside the protected premises to unlock the door and exit without using the keypad.

**NOTE:** For more information on programming the Egress button, please see *Programming Egress Delay/Warning* on pg. 31.

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*The # key is not needed if the keypad is programmed for auto entry mode. See pg. 28.

## Installer Notes

Copy this chart during setup to use for future reference.

| User # | User's Name | Output (1, 2, or3) | Security Level* | User ID | User Code (or Duress Code) | Card# | Notes |
|---|---|---|---|---|---|---|---|
| 1 Sample | John | 1 | 4 | 001 | Common | 001 | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
| 9 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | | | | | | | |
| 22 | | | | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | | | | |
| 26 | | | | | | | |

*Security levels: 1 = card only, 2 = code only, 3 = card + unique user code, 4 = card + common user code

## Accessories

### Proximity Cards

(sold in packs of 10)
PR-K1S1-A

### Proximity Key Fobs

(sold in packs of 10)
PR-K1K1-AQ

## Troubleshooting

| | |
|---|---|
| *User code* doesn't work | • Make sure you programmed a *user code* instead of a *super user* or *common user code.*<br>• Try deleting the *super user code* and *common user code* then reprogramming the *user code*. |
| *Master programming code* doesn't work | • See the DAP process (pg. 33). |
| Keypad constantly beeps on power-up | • This is a normal operation. Press 12# to prematurely stop the beeping (see *Power Up the Keypad*, pg. 13). |

## Warranty and Notices

# SECO-LARM ® U.S.A., Inc.

16842 Millikan Avenue, Irvine, CA 92606
Phone (949) 261-2999  |  (800) 662-0800

Website www.seco-larm.com
Email sales@seco-larm.com

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