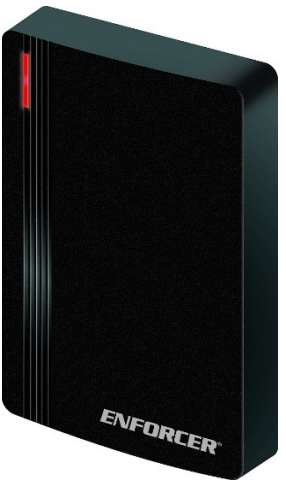
# PR-3123-PQ, PR-3125-PQ

## Stand-Alone / Wiegand Proximity Reader

## Manual


PR-3123-PQ




PR-3125-PQ

### Features:

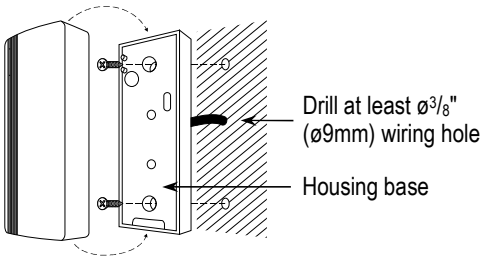
- 1,000 Users (up to 998 users and 2 duress users)
- 9~24 VDC Operation
- Low current draw – 90mA max.
- Form C relay output – 2A@12VDC
- Adjustable output time – 0.5~99s, or toggle
- Built-in tamper alarm and external alarm output
- Multicolor status LED
- EEPROM Memory protects programmed information in case of power loss
- Includes infrared programmer
- Outdoor rated – IP66
- Egress input lets users exit the premises without using a card
- Can serve as Wiegand output reader or controller, output and input – 26~37 bits
- EM 125kHz
- 10 User proximity cards included
- 2-Door interlock
- Extreme cold tolerance to -40° F (-40° C)
- Sturdy black ABS plastic housing
- Easy duplication of users to additional devices

## Quick Installation Guide:

This page is for installers looking to do a basic installation and programming of the reader. For more in-depth installation and programming instructions, see "Table of Contents" on pg. 3.

## Mounting Diagram:

PR-3123-PQ shown, PR-3125-PQ is similar in layout

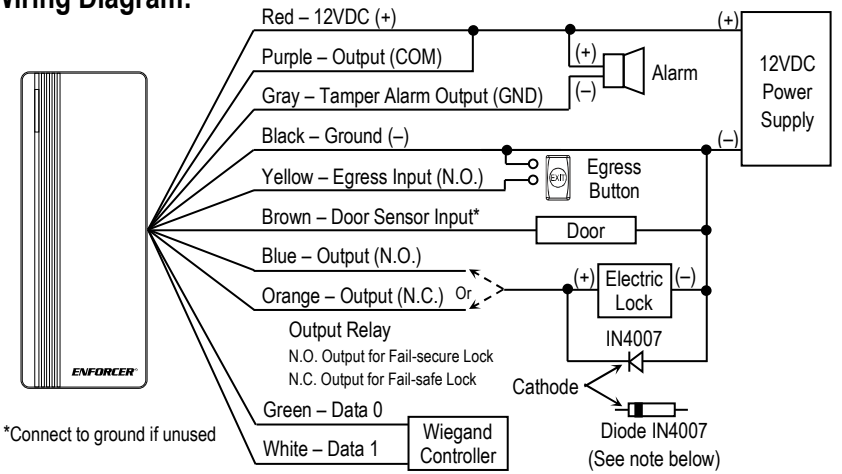



## Parts List:

- 1x Proximity reader
- 1x Infrared programmer
- 1x Diode
- 2x Mounting screws
- 2x Plastic screw anchors
- 1x Master add card
- 1x Master delete card
- 10x User proximity cards*
- 1x Manual

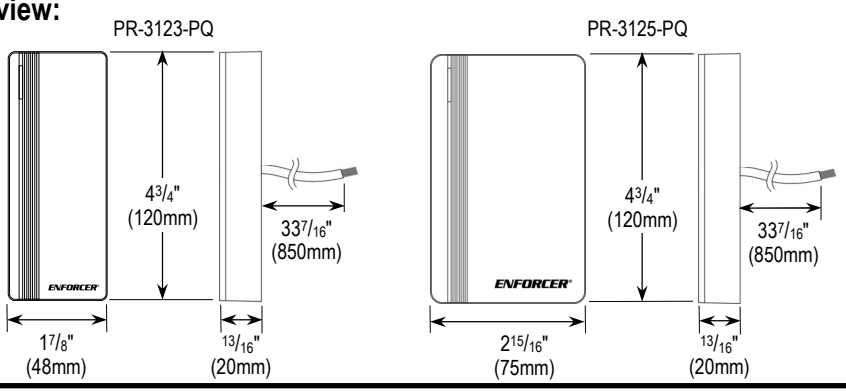
*Additional cards / key fobs sold separately (pg. 16)

## Quick Wiring Diagram:




**NOTE:** For DC-powered electric strikes, connect the included diode—with the cathode (striped end ——▮——) toward the positive side—as close as possible and in parallel with the electric strike. This absorbs possible electromagnetic interference to prevent operation of the strike from damaging the reader. Do not connect a diode when using electromagnetic locks or with AC powered strikes.

## Overview:



## Quick Programming Guide:

**Programming Tips:**

- All programming is done using the included infrared programmer or Master Add/Delete Cards.
- Master programming code (6 digits) should be programmed before any other programming.
- A steady red LED indicates that reader is powered on and ready. The LED will change to orange and a single beep will sound to indicate the device has entered programming mode.

**Programming Instructions:**

Follow the instructions below if the following covers your needs:

- A new master programming code
- Setting a user card
- A door-unlocked time of 4 seconds after the output is activated
- Access mode / security level set to "single card" (default)

1. Enter base programming mode:
   [*] [1][2][3][4][5][6] [#]
   **NOTE:** [1][2][3][4][5][6] is the factory default master programming code. A new master programming code (6 digits) should be set the first time you enter programming mode.

2. Set the master programming code (6 digits):
   [0] [X][X][X][X][X][X] [#] [X][X][X][X][X][X] [#]
   **NOTE:** [X][X][X][X][X][X] is the new master programming code and must be entered twice.

3. Set a user card to operate the output (unlock the door):
   [1] [1][5] [#] Read Card [#]
   **NOTES:**
   - [1][5] [#] chooses user ID #15 of 998 possible user IDs (0~997).
   - To add other users do not repeat the initial function code [1].

4. Set the output time (skip this step if the default value of 5 seconds is acceptable):
   [3] [4] [#]
   **NOTE:** [4] sets the output delay time for 4 seconds.

5. Exit programming mode:
   [*] One short beep will sound to indicated that the reader has exited programming mode.

## Table of Contents:

## Specifications:

| Model | | PR-3123-PQ | PR-3125-PQ |
|---|---|---|---|
| Operating voltage | | 9~24 VDC | |
| Current draw | Standby | 30mA@12VDC | |
| | Active | 90mA@12VDC (max.) | |
| Outputs | Form C | 2A@12VDC | |
| | Alarm | 2.5A@12VDC | |
| | Wiegand | 26~37 bits | |
| Wiegand input | | 26~37 bits, PIN input – 4, 8, or 10 bits | |
| Egress input | | N.O. Ground | |
| Door sensor input | | N.C. Ground | |
| Card type | | 125kHz EM | |
| Enclosure material | | Black ABS plastic | |
| Operating temperature | | -40°~140° F (-40°~60° C) | |
| Operating humidity | | 10~98% non-condensing | |
| Dimensions | | $1^{7}/_{8}$"x$4^{3}/_{4}$"x$^{13}/_{16}$" (48x120x20 mm) | $2^{15}/_{16}$"x$4^{3}/_{4}$"x$^{13}/_{16}$" (75x120x20 mm) |
| Weight | | 4.4-oz (125g) | 6.5-oz (185g) |

## Important Notes:

**IF USING THE READER WITH A MECHANICALLY OPERATED DOOR OR GATE, MOUNT THE UNIT 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 reader. Do not apply power until all connection wiring is completed.
2. The reader must be properly grounded. Use a minimum 22AWG wire connected to the common ground wire. Failure to do so may damage the unit.
3. All wiring and programming should be done by a professional installer to reduce the risk of improper installation.
4. The user's operating guide for this reader is located on pg. 13 of this manual. Be sure to store this manual in a safe place for future reference.

## LED Indicators and Device Sounds:

| Status | Sounds | LED |
|---|---|---|
| Power on in standby mode | -- | Red steady |
| In base programming mode | 1 Beep | Red flashing |
| In function programming mode | 1 Beep | Orange steady |
| Exit programming mode | 1 Beep | Red steady |
| Successful operation | 1 Beep | Green flash once |
| Unsuccessful operation | 3 Beeps | Red flashes 3 times |
| Built-in alarm | Rapid beeping* | Red flashing rapidly |

*De-activate the built-in alarm by entering a valid card.

## Wiring Chart:

| Color | Function | Description |
|---|---|---|
| Red | Power (+) | Connect to +12VDC power supply |
| Black | Ground (-) | Connect to Ground |
| Yellow | Egress Input | N.O. Pushbutton contact to ground. Press button to activate the output |
| Brown | Door Sensor | Connect to a magnetic contact or door sensor (connect to ground if unused) |
| Blue | Output N.O. | NO/NC/COM, relay output, max. 2A@12VDC |
| Purple | Output COM | |
| Orange | Output N.C. | |
| Gray | Alarm Output | Transistor ground output, max. 2.5A@12VDC. |
| Green | Data 0 | Wiegand controller |
| White | Data 1 | Wiegand controller |

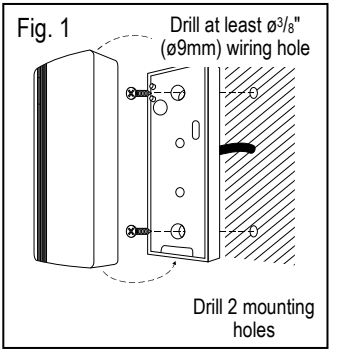
See also Quick Wiring Diagram on pg. 2.

**NOTE:** For DC-powered electric strikes, connect the included diode—with the cathode (striped end ——|▮|——) toward the positive side—as close as possible and in parallel with the electric strike. This absorbs possible electromagnetic interference to prevent operation of the strike from damaging the reader. Do not connect a diode when using electromagnetic locks or with AC powered strikes.

## Installation:

1. Find a suitable location at a height convenient to most users.
2. Insert a small screwdriver or other flat object into the slot at the top rear of the reader and gently pry the reader from the base.
3. Using the housing base as a template, mark the holes needed for the wiring and mounting screws and drill needed holes (Fig. 1). Ensure that the wiring hole is large enough to allow the wiring to be pushed in without crimping.
4. Run wiring through the wall to the wiring hole in the wall
5. Thread the reader wires through the center of the reader base and connect all according to "Wiring Chart" above.
6. Carefully push the wires through the hole in the wall.
7. Install the base using the included mounting screws and mounting screw anchors (if necessary). Ensure the correct orientation as shown in Fig. 1.

Fig. 1




**NOTE:** For weatherproof installation, add a bead of silicone sealant around the base where it meets the wall.

8. Reattach the reader to the base pressing until you hear a click securing the reader to the base.

## Getting Ready to Program:

The reader is programmed using the enclosed infrared programmer. All descriptions requiring any keypad entry is to be done using the infrared programmer's keypad.

The reader is activated by user proximity cards.* All cards must have a unique User ID (0~997 for users and 998 or 999 for duress). It is important to record all User IDs for future management tasks.

*In this manual "card" refers to either proximity cards or fobs.

## Getting Ready to Program (Continued):

**Card types:**

There are four types of cards:

- Master add card* – Used **only** to quickly add user cards without entering programming mode. This will assign each user card to the first available user ID in consecutive order.
- Master delete card – Used **only** to quickly delete user cards without entering programming mode.
- User cards – Up to 998 user cards (user IDs 0~997) can be assigned to activate the relay.
- Duress cards – Up to 2 duress cards (user ID s 998~999) can be assigned. Duress cards are used under duress to activate the relay while triggering an alarm.

**Security Levels:**

There are two possible security levels (see "Programming the Access Mode / Security Level," pgs. 7~8 for more detail):

- Single card (default)
- Multiple cards (for extra security)

**Enter and Exit Base Programming Mode:**

All programming of the reader is done from base programming mode.

1. Enter base programming mode using the master programming code:
   [*] [X][X][X][X][X][X] [#] – (One beep will sound and the LED will flash red
   **NOTE:** [X][X][X][X][X][X] is the master programming code (6 digits). [1][2][3][4][5][6] is the default (see "Programming the Master Programming Code," pg. 7).
2. Within the base programming mode, press a function code (see Programming Format and Default Values," below) to enter function programming mode (the LED changes to steady orange). The function code is not repeated between programming different items under the same function code.
3. Exit function programming mode:
   Press the [#] key.
4. Exit base programming mode:
   Press the [*] key or wait 25 seconds to exit automatically.

**NOTES:**

- **DO NOT DISCONNECT THE READER FROM POWER WHILE IN PROGRAMMING MODE.** Disconnecting the unit while in programming mode may cause a memory error.
- The LED will flash green once to indicate that the unit has entered base programming mode and also when a programming step is successful. If you are unsure which function programming mode you are in, press the [#] key to return to base programming mode and then press the number of the function to proceed.
- Except when using the Master add and Master delete cards, the reader must first be in base programming mode for all programming functions.

*If the master add/delete cards are lost, see "Resetting to Factory Default and Programing Add/Delete Cards," pg. 16)

## Programming Format and Default Values:

In this manual, the format used for programming the reader is as follows:

- A single-digit ([X]) FUNCTION CODE to tell the reader what is being programmed.
- A varying number of digits ([X]) to represent the parameters of that FUNCTION.
- The [#] key to confirm programming of the FUNCTION and exit to base programming mode.
- The [*] key to exit programming mode and return to standby mode.

## Programming Format and Default Values (Continued):

The following is a list of the different programming functions:

| Function Code* | Parameters | Default Functions and Values | Pg. # |
|---|---|---|---|
| 0 | Master programing code | Default 123456, code length 6 digits | 7 |
| 1 | Add user/duress cards | No default, must be programmed | 8~9 |
| 2 | Delete user/duress cards | No default, must be programmed | 10 |
| 3 | Output mode/time | Momentary 5 seconds | 10~11 |
| 4 | Access mode / security level | Single card | 8 |
| 5 | Set external alarm/time | 1 minute | 11~12 |
| 6 | Wrong-card lockout/alarm | Lockout disabled | 12~13 |
| 7 | Notification sounds, LED<br>Operation mode | Both ON<br>Stand-alone / controller mode | 11<br>7 |
| 8 | Set Wiegand output/input formats | Output/input format – 26, PIN output/input bits – 4 | 14~15 |
| 9 | Set two-door interlock mode,<br>Duplicate users to another reader | Interlock default – OFF<br>Duplicate – no default, must be programmed | 13~14<br>15 |

*Press the function code only to enter the programming mode for that function. It should not be repeated between each parameter.

## Programming the Master Programming Code:

The master programming code is used to enter base programming mode.

1. Enter base programming mode (see "Enter and Exit Base Programming Mode," pg. 6).
2. Enter the new master programming code (6 digits):
   [0] [X][X][X][X][X][X] [#] [X][X][X][X][X][X] [#] (where "X" is the new master programming code)
3. Exit programming mode:
   Press the [*] key or wait 25 seconds to exit automatically.

## Setting the Reader Operation Mode:

The reader can operate as a standalone reader, a controller connected to an external Wiegand reader, or a Wiegand reader. To set the operating mode, use the following general formula from within base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

[7] [A] [#]

[7] – Operating Mode function code (a short beep will sound, and the LED will change to orange)

[A] – Set the operating mode

**Operating Mode:**

- [2] – Standalone or controller mode (default)
- [3] – Wiegand reader mode

**NOTE:** The [#] key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the [*] key (see "Enter and Exit Base Programming Mode," pg. 6).

## Programming the Access Mode / Security Level:

The reader can be programmed to one of two access modes / security levels:

- Single user card – a user must use a user card for access
- Multiple user cards – multiple (2~9) user cards are required for access. Cards may be read in any order up to the set number with an elapse of no more than 5 seconds between each card. No particular card can be repeated. This could be used for extremely secure areas requiring authentication by more than one person.

When programming the access mode / security level, use the following general formula from within base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

4 A(A) #

4 – Program Access Mode function code (LED will change to steady orange)

A – Access Mode

**Access Mode / Security Level:**

- 2 – Single user card (default)
- 3 2~9 – Multiple user cards (the second number 2~9 sets the number of cards required for access).

**NOTES:**

- If the same card is repeated, or a wrong card is used, the device will return to standby without triggering the output.
- In multiple user card mode, the elapsed time between each card must not exceed 5 seconds, otherwise, the device will return to standby.
- The # key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the * key (see "Enter and Exit Base Programming Mode," pg. 6).

**Examples:**

1. Set the access mode to a single card:
   4 2 #
2. Set the access to require four user cards:
   4 3 4 #

## Programming User Proximity Cards:

There are multiple ways to program proximity cards. Proximity cards may be assigned to User IDs between 0 and 997. When programming cards, use the following general formula after entering base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

**Individually by Reading Cards:**

1 A # Read Card # – After a short beep, you may continue to add cards by repeating these steps, but without repeating the function code 1.

1 – Add Users function code (a short beep will sound, and the LED will change to steady orange)

A – 0 to 9 9 7 – 998 unique User IDs to trigger the device (if A # is omitted, the device will assign the user card to the first available User ID)

## Programming User Proximity Cards (Continued):

**Adding Cards in a Large Batch (If Using Cards with Printed Numbers):**

This method allows the addition of up to 998 cards in a single batch. This is especially useful in the initial setup. This process adds the cards in consecutive order, assigned to available user IDs consecutively.

1 A # B # Read Card # – The process will take up to 2 minutes

1 – Add Users function code (a short beep will sound, and the LED will change to steady orange)

A – 0 to 9 9 7 – the beginning user ID

B –the number of cards to be added

**NOTES:**

- The user IDs will be assigned in consecutive order beginning from the beginning user ID.
- The card numbers must be in consecutive order with no gaps in the numbering sequence and must start with the lowest number.

**With the Master Add Card:**

The Master Add Card allows you to enter cards quickly without entering programming mode. It takes you directly into the "add user" function mode without needing to enter the master programming code and the 1 add user function code. Once in this mode, you may add cards using either of the methods described above but omitting the 1. When complete, present the Master Add Card again to return to standby mode.

**NOTES:**

- It is important to record each User ID assigned in order to simplify future user management.
- A user ID can only have a single card assigned.
- Additional users may be entered in succession without repeating the function code 1.
- The # key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the * key (see "Enter and Exit Base Programming Mode," pg. 6).

**Examples:**

1. Program user card for User ID #0:
   1 0 # Read Card #
2. Program a user card allowing the device to auto-assign to the first available User ID (not recommended unless you have a complete record of already assigned User IDs):
   1 Read Card #
3. Program a batch of 50 cards, starting with card# 23456789 and beginning with user ID #0:
   1 0 # 5 0 # Read Card # 23456789 #

**NOTE:** The add user function code 1 places you into this programming mode. Press the add user function code only before adding the first user. To continue to add other users in the same session, do not repeat the add user function code 1.

## Programming Duress Cards:

Duress cards are assigned to user IDs 998 and 999 to trigger an alarm while unlocking the door. Duress cards are programmed in the same manner as regular users, **except** that you must particularly assign them to user ID 998 or 999 (see "Programming User Proximity Cards," pgs. 8~9).

**IMPORTANT NOTES:**

- The duress alarm will sound for the number of minutes set for the external alarm (see "Programming the External Alarm Output," pgs. 11~12) and cannot be silenced before that time is up.
- If a user card is used while the duress alarm is sounding, the alarm will continue to sound and not stop even after the programmed alarm output time expires. When this happens, the duress card must be used again, after which the timing cycle will start again, and the alarm will stop only after that time has expired.

## Deleting Users:

**Deleting User/Duress Cards**

To delete a user or duress card, use the following general formula from within base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

2 A A A #

2 – Delete Users function code (a short beep will sound, and the LED will change to steady orange)

Either: A – 0 to 9 9 9 – the user/duress ID (Duress IDs must use this method)

Or: A – Read card (or enter card number if using numbered cards)

**Deleting Cards with the Master Delete Card**

The Master Delete Card works similar to the Master Add Card but allows you to delete cards quickly without entering programming mode. The card takes you directly into the "delete user" function mode without needing to enter the master programming code and the 2 delete user function code. Once in this mode, you delete cards using any of the methods described above but omitting the 2. When complete, present the Master Delete Card again to return to standby mode.

**Deleting All Users:**

To delete all users while retaining the reader configuration, use the following formula from within base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

2 X X X X X X #

2 – Delete Users function code (a short beep will sound, and the LED will change to steady orange)

X – Master programming code

**NOTES:**

- Duress IDs cannot be deleted using a user or master delete card, but must be deleted with the Duress ID.
- Any of the above methods will delete the user ID along with any card connected to it.
- The # key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the * key (see "Enter and Exit Base Programming Mode," pg. 6).

**Examples:**

1. Delete User ID #501:
   2 5 0 1 #
2. Delete a user card #56789012:
   2 5 6 7 8 9 0 1 2 (or Read Card) #
3. Delete all users (if the master programming code is 631732):
   2 6 3 1 7 3 2 #

## Programming the Output Mode and Time:

The relay can be programmed to toggle the relay ON/OFF (toggle mode), or to trigger for a programmed length of time up to 99 seconds before automatically turning OFF. The output 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 the following general formula from within base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

3 A A #

3 – Program Output Mode and Time function code (a short beep will sound, and the LED will change to steady orange)

A – Output Mode and Output Time

## Programming the Output Mode and Time (Continued):

**Output Mode and Output Time:**

- [0] – Start/stop (toggle) mode. In this case, the output starts when a user card is presented, and stops when a user card is entered again.
- [1] to [9][9] – The output triggered by a user card lasts up to 99 seconds before automatically turning off (1=500ms, default: 5 seconds).

**NOTES:**

- For programming the output timing, 1=500ms. 2~99 represents full seconds.
- The [#] key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the [*] key (see "Enter and Exit Base Programming Mode," pg. 6).

**Examples:**

1. Set the output to toggle mode:
   [3] [0] [#]
2. Set the output to 60 seconds:
   [3] [6][0] [#]

## Programming Notification Sounds and LED:

The reader sounds/notifications and LED may be disabled. Setting the reader notification sounds affects all sounds from the reader, including successful card entry notifications, duress alarm, and wrong-card alarm. When programming, use the following general formula from within base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

[7] [A] [#]

[7] – Program Notification Sounds/LED function code (LED will change to steady orange)

[A] – Enable/Disable Notification Sounds/LED

**Enable/Disable Reader Sounds/Notifications:**

- [0] – Disable notification sounds
- [1] – Enable notification sounds (default)
- [4] – Disable LED
- [5] – Enable LED (default)

**NOTES:**

- Disabling the notification sounds affects only the internal sounds and not the external alarm output.
- The duress alarm and wrong-card alarm will trigger both the internal notification beep and the external alarm, depending on their settings.
- The [#] key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the [*] key (see "Enter and Exit Base Programming Mode," pg. 6).

## Programming the External Alarm Output:

The external alarm sounds an external alarm when the tamper, duress, or wrong-card alarm (if enabled, see "Programming the Wrong-Card Lockout/Alarm," pg. 12~13) is triggered. However, when in Wiegand reader mode (see "Setting the Reader Operation Mode," pg. 7), these settings will have no effect as external alarm settings are programmed in the controller. Duress and wrong-card alarm output will be passed to the Wiegand controller, but there is no tamper alarm in Wiegand reader mode.

To program, use the following formula in base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

## Programming the External Alarm Output (Continued):

5 A #

5 – Program Alarm function code (LED will change to steady orange)

A – Alarm Disable/Enable and Alarm Time

**Alarm Disable/Enable and Alarm Time:**

- 0 – Disable alarm (factory default)
- 1 to 3 – Enable and set the alarm time, 1~3 minutes (factory default, 1 minute)

**NOTES:**

- When in Wiegand reader mode, the external alarm programming will have no effect. External alarms are handled by the controller. The reader will have no tamper alarm.
- The # key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the * key (see "Enter and Exit Base Programming Mode," pg. 6).

**Examples:**

1. Disable the external alarm:
   5 0 #
2. Enable the external alarm and set it to 2 minutes:
   5 2 #

## Programming the Wrong-Card Lockout/Alarm:

The device can be programmed to either lockout or sound an internal alarm after 10 successive wrong cards. The lockout continues and the LED flashes red for 10 minutes and cannot be reset before then. The built-in notifications and external alarm sounds for the length of time set in the alarm settings (1~3 minutes, see notes below), or until stopped with a valid user card or the master programming code using the infrared remote.

When programming the wrong-card lockout, use the following general formula from within base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

6 A #

6 – Program Wrong-Card Lockout/Alarm function code (LED will change to steady orange)

A –Disable or Enable/Configure the Wrong-Card Lockout/Alarm

**Disable or Enable/Configure Wrong-Card Lockout/Alarm:**

- 0 – Disable wrong-card lockout (factory default)
- 1 – Enable wrong-card lockout to deny access for 10 minutes
- 2 – Enable wrong-card alarm to sound the keypad notifications / external alarm

**NOTES:**

- If wrong-card lockout is enabled, the LED will flash red, and all access will be denied for 10 minutes after 10 successive wrong cards.
- If wrong-card alarm is enabled, the LED will flash red and the built-in notifications (if enabled, see "Programming the Notification Sounds and LED," pg. 11) and external alarm (if enabled, see "Programming the External Alarm Output, pgs. 11~12) will sound and continue for the length of time programmed for the alarm or until a valid master programming code or user card is entered. This setting requires either or both the built-in notifications and external alarm output to be enabled and the alarm timing is set by the external alarm settings.

## Programming the Wrong-Card Lockout/Alarm (Continued):

- The [#] key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the [*] key (see "Enter and Exit Base Programming Mode," pg. 6).

**Examples:**

1. Disable the wrong-card lockout:
   [6] [0] [#]
2. Enable the wrong-card lockout to deny access for 10 minutes:
   [6] [1] [#]
3. Enable the wrong-card alarm for the set time (disabled with a valid master code or user card):
   [6] [2] [#]

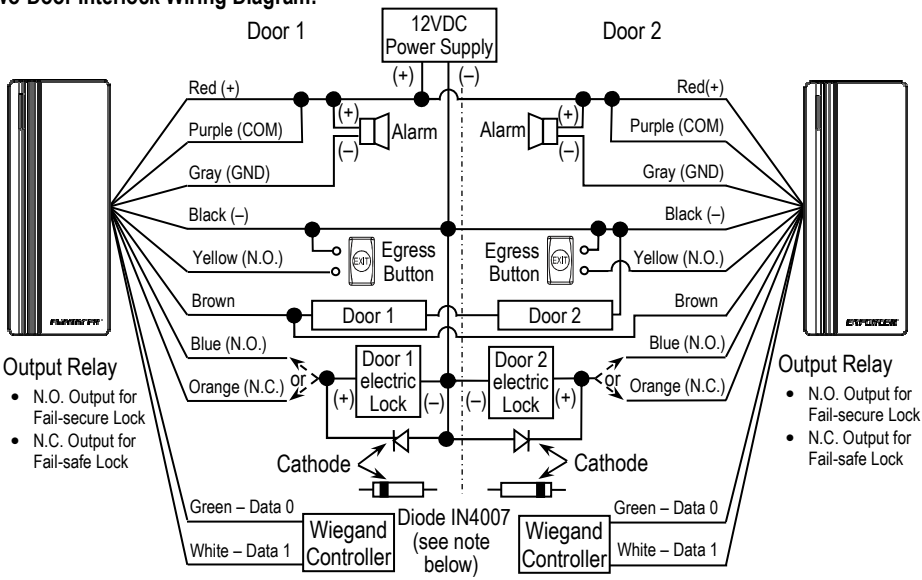
## User Operation of the Reader:

- Present the proximity card to activate the relay.
- You should hear 1 beep (if sounds are enabled) and the status LED should turn green to indicate that the user card is accepted and the door is unlocked.
- Present the proximity card to silence an alarm (except for duress alarms).

## Setting up a Two-Door Interlock System with Two Readers:

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

**Two-Door Interlock Wiring Diagram:**




**NOTE:** For DC-powered electric strikes, connect the included diode—with the cathode (striped end ——▮——) toward the positive side—as close as possible and in parallel with the electric strike. This absorbs possible electromagnetic interference to prevent operation of the strike from damaging the reader. Do not connect a diode when using electromagnetic locks or with AC powered strikes.

**Programming the Interlock System:**

When programming the interlock system, use the following general formula from within base programming mode (see "Enter and Exit Base Programming Mode," pg. 6):

[9] [A] [#]

[9] – Program the Interlock System function code (LED will change to steady orange)

[A] – Disable or Enable the Interlock System

## Setting up a Two-Door Interlock System with Two Readers (Continued):

**Disable or Enable the Interlock:**

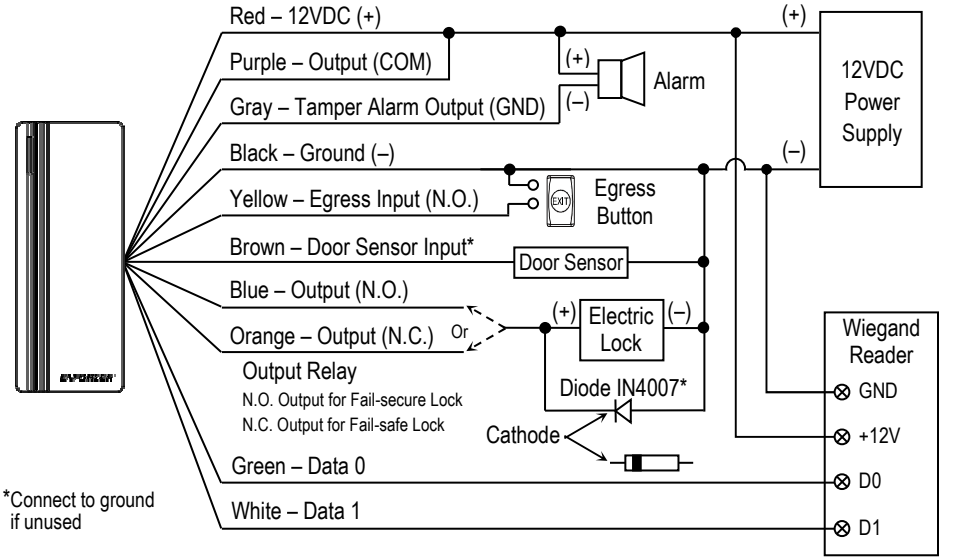
- [0] – Disable the interlock (factory default)
- [1] – Enable the interlock

**NOTE:** The [#] key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the [*] key (see "Enter and Exit Base Programming Mode," pg. 6).

## Wiegand Controller Mode:

The reader can work as a controller connected to an external Wiegand reader.

**Wiegand Controller Mode Wiring Diagram:**




**NOTE:** For DC-powered electric strikes, connect the included diode—with the cathode (striped end ——▮——) toward the positive side—as close as possible and in parallel with the electric strike. This absorbs possible electromagnetic interference to prevent operation of the strike from damaging the reader. Do not connect a diode when using electromagnetic locks or with AC powered strikes.

**Set Wiegand Input Bits/PIN Input Format:**

Set the Wiegand input bits and format according to the output format of the external reader. To set the Wiegand input bits and the Wiegand PIN output format, use the following general formula from within base programming mode (see "Enter and Exit Base Programming Mode," pg.6):

[8] [A][A] [#]

[8] – Set Wiegand Input Bits/PIN Input Format function code (a short beep will sound, and the LED will change to steady orange)

[A] – Wiegand Input Bits/PIN Input Format

**Wiegand Input Bits/PIN Input Format:**

- [2][6] to [3][7] – Set Wiegand input bits (26~37, factory default, 26)
- [4], [8], or [1][0] – Set Wiegand PIN input format (4, 8, or 10, factory default, 4)

## Wiegand Controller Mode (Continued):

**NOTES:**

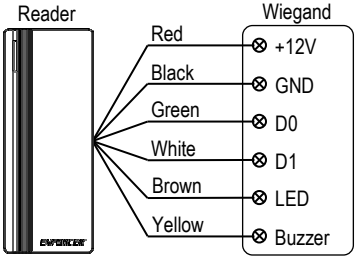
- Basic programming is the same as in the stand-alone mode.
- If the external device is an EM card reader, users can be added/deleted on either device. If the external device is an HID and Mifare reader, users can only be added or deleted on the external reader.
- The # key returns you to base programming mode (the LED will flash red). Exit programming mode by pressing the * key (see "Enter and Exit Base Programming Mode," pg. 6).

## Wiegand Reader Mode:

The reader can work as a standard Wiegand reader with an external controller. Be sure to set the reader operation mode to Wiegand reader mode (see "Setting the Reader Operation Mode," pg. 7 and "Programming the External Alarm Output," pgs. 11~12).

Connect reader and controller as in the diagram on the right.

**Wiegand Reader Mode Wiring**




**NOTES:**

- The reader will override most controller settings.
- The brown wire will control the LED. When its voltage is low, the LED will become green.
- The yellow wire will control the internal buzzer. When its voltage is low, the buzzer will sound.

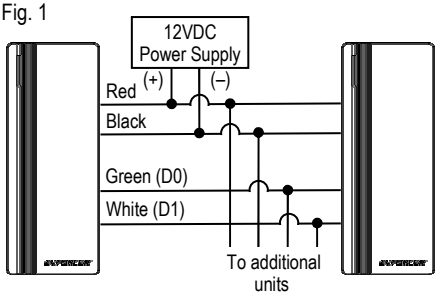
**Set Wiegand Output Bits/Format:**

Set the Wiegand output bits/format according to the input format of the controller. To set, use the same formula as used for setting the Wiegand input bits/format (See, "Set Wiegand Input Bits/Format," pg. 14)

## Duplicating Users to Another Reader:

User data can be duplicated from one reader to other reader (up to 10 at one time) that support this function. All user data will be transferred to the second unit (taking about 3 minutes for 1,000 users), overwriting any existing user data.

Fig. 1




Connect the readers in parallel as shown in Fig. 1, all wires to the same corresponding color.

Make sure that all readers have the same master programming code. To transfer user data, use the following general formula from within base programming mode on the main reader containing the user data (see "Enter and Exit Base Programming Mode," pg. 6):

9 6 # – Initiate User Data Transfer function code (LED will change to steady orange)

**NOTES:**

- All readers must support the data transfer function and have the same master programming code.
- Any user data existing on the second device will be overwritten.
- When transfer is complete, a short beep will sound, the LED will flash green once and change to red.
- Exit programming mode by pressing the * key after transfer is complete.

## Resetting the Reader to Factory Default:

The reader must be connected to a Request-to-Exit (RTE) button to be reset to factory default settings. When resetting to factory default, user information is retained. You may also program new Master Add and Master Delete Card if they are lost. To reset the reader to factory default settings, follow steps 1~4 below. To also program new Master Add and Master Delete cards, follow steps 1~3 and 5 below.

1. Power off the reader
2. Hold down the egress button and power the reader on, continuing to hold down the egress button for approximately 10 seconds until you hear 2 beeps and the LED turns orange.
3. Release the egress button.
4. If you only need to reset the reader to factory default, wait until the LED changes to red (about 30 seconds) indicating that the reset has completed successfully.
5. If you need to program new Master Add and Master Delete Cards, within 30 seconds, read two cards. The first will become the Master Add Card, and the second the Master Delete Card. The LED will change to red indicating that the reset has completed successfully.

## Troubleshooting:

| | |
|---|---|
| Unit fails to accept a new user/duress card | • Ensure the User ID assigned is between 0 and 997 for users and either 998 or 999 for duress cards<br>• Ensure the user card is not already assigned to another user |
| Unit fails to respond to a programmed user card | • Ensure the unit is in standby mode by pressing the ▭ key until the LED becomes steady red |

## Additional Accessories Available from SECO-LARM®:

**PR-K1K1-AQ**

Proximity key fobs
(sold in packs of 10)


**PR-K1S1-A**

Proximity cards
(sold in packs of 10)


**FCC COMPLIANCE STATEMENT** **FCC ID: K4E2612SPQ**

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Notice: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

**IMPORTANT WARNING:** For a weather-resistant installation, ensure that the unit is properly sealed where the housing base meets the wall. Incorrect mounting may lead to exposure to rain or moisture in the enclosure which could cause a dangerous electric shock, damage the device, and void the warranty. Users and installers are responsible for ensuring that this product is properly installed and sealed

**IMPORTANT:** Users and installers of this product are responsible for ensuring that the installation and configuration of this product complies with all national, state, and local laws and codes. SECO-LARM will not be held responsible for the use of this product in violation of any current laws or codes.

**California Proposition 65 Warning:** These products may contain chemicals which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

**WARRANTY:** This SECO-LARM product is warranted against defects in material and workmanship while used in normal service for one (1) year from the date of sale to the original customer. SECO-LARM's obligation is limited to the repair or replacement of any defective part if the unit is returned, transportation prepaid, to SECO-LARM. This Warranty is void if damage is caused by or attributed to acts of God, physical or electrical misuse or abuse, neglect, repair or alteration, improper or abnormal usage, or faulty installation, or if for any other reason SECO-LARM determines that such equipment is not operating properly as a result of causes other than defects in material and workmanship. The sole obligation of SECO-LARM and the purchaser's exclusive remedy, shall be limited to the replacement or repair only, at SECO-LARM's option. In no event shall SECO-LARM be liable for any special, collateral, incidental, or consequential personal or property damage of any kind to the purchaser or anyone else.

**NOTICE:** The SECO-LARM policy is one of continual development and improvement. For that reason, SECO LARM reserves the right to change specifications without notice. SECO-LARM is also not responsible for misprints. All trademarks are the property of SECO-LARM U.S.A., Inc. or their respective owners. 

**SECO-LARM® U.S.A., Inc.**
16842 Millikan Avenue, Irvine, CA 92606 Website: www.seco-larm.com
Phone: (949) 261-2999 | (800) 662-0800 Email: sales@seco-larm.com

PICSN8
MI_PR-312x-PQ_220727.docx