

ENFORCER®

SK-2611-SFSQ

Fingerprint Reader and Keypad

Manual



Features:

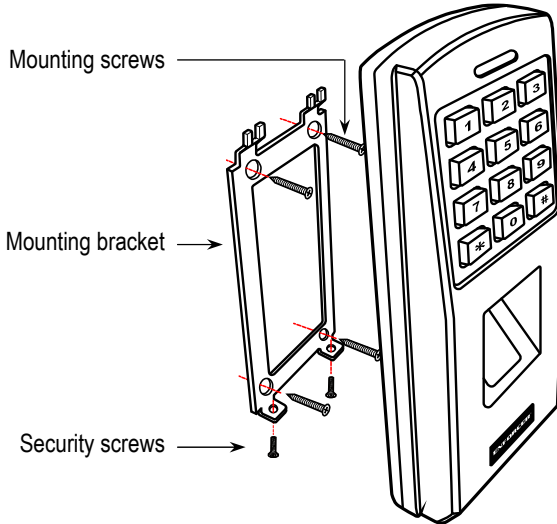
- 500DPI Optical fingerprint reader
- Up to 1,000 users (up to 500 fingerprint users, up to 500 PIN users)
- User code length 4~6 digits
- Fingerprint identification time – <1 second
- Fingerprint false acceptance rate – 0.0001%
- Fingerprint false rejection rate – 0.01%
- 12VDC Operation
- Form C relay output
- Tamper alarm output
- Adjustable relay output time – 1~99 seconds, or toggle
- For indoor use only
- Illuminated fingerprint reader window

ENFORCER Fingerprint Reader and Keypad

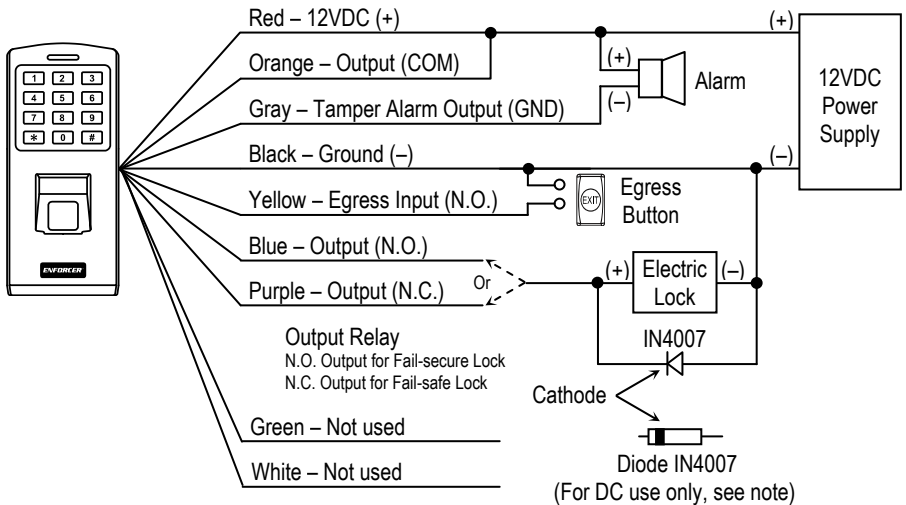
Quick Installation Guide:

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

Mounting Diagram:



Quick Wiring Diagram:



NOTE: Connect the included diode as close as possible and in parallel with an electric strike. This absorbs possible electromagnetic interference to prevent operation of the strike from damaging the fingerprint reader/keypad. Do not connect a diode when using electromagnetic locks.

Quick Programming Guide:**Programming Tips:**

- Master fingerprints (up to 5) should be programmed before any other programming is completed.
- A flashing red LED indicates that fingerprint reader/keypad is in standby mode. A solid blue or purple LED indicates the unit is in programming mode.

Programming Instructions:

Follow the instructions below if the following covers your needs:

- A new master fingerprint.
- Setting one user fingerprint and one user code.
- A 3-second programming delay time in opening the door after the output is activated.

1. Enter programming mode:

* 1 2 3 4 5 6

NOTE: * 1 2 3 4 5 6 is only the master code until a master fingerprint is learned.

2. Set the master fingerprint:

* 1 M M #

NOTE: M is the new master fingerprint.

3. Set a user fingerprint to operate the output (unlock the door):

1 # U U

NOTE:

- 1 # chooses fingerprint user ID #1 of 500 possible fingerprint users (1~500).
- U is the new user fingerprint.

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

5 0 1 # X X X X #

NOTE:

- 5 0 1 # chooses user code ID #501 of 500 possible user codes (501~1000).
- X X X X is the new user code for user ID #501.

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

* 3 3 #

NOTE: 3 sets the output delay time for 3 seconds.

6. Exit programming mode:

#

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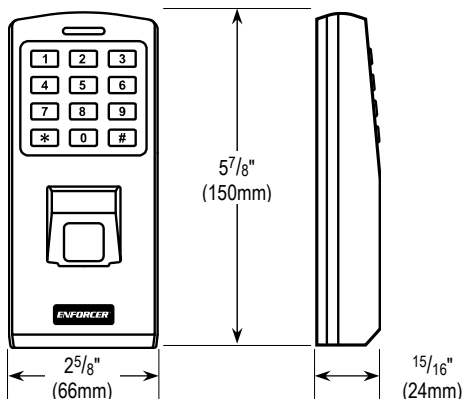
Features:

- 12VDC Operation
- Up to 500 fingerprint users (1~500)
- Up to 500 user codes (501~1000)
- Output: Form C relay, 2A@12VDC max.
- Output can be programmed to activate for up to 99 seconds or toggle
- Tamper alarm output: Transistor ground, 2.5A@12VDC max.
- Fingerprint reader window illuminates when finger is present
- EEPROM Memory protects programmed information in case of power loss
- All features programmed directly from the fingerprint reader/keypad: No need for an external programmer
- Egress input lets users exit the premises without presenting a fingerprint or keying in a code
- 500DPI Optical fingerprint reader
- Fingerprint identification time – <1 second
- Fingerprint false acceptance rate – <0.0001%
- Fingerprint false rejection rate – <0.01%
- For indoor use only

Specifications:

Operating voltage		12VDC
Current draw	Standby	40mA
	Active	100mA
Outputs	Form C	2A@12VDC
	Tamper alarm	2.5A@12VDC
Egress input		N.O. Ground
Enclosure material		Zinc alloy
Operating temperature		-4°~122° F (-20°~50° C)
Operating humidity		20~90%
Dimensions		2 ⁵ / ₈ "x5 ⁷ / ₈ "x1 ⁵ / ₁₆ " (66x150x24 mm)
Weight		14.8-oz (420g)

Overview:



Parts List:


1x Fingerprint reader and keypad	1x Manual	1x Diode
4x Mounting screws	4x Mounting screw anchors	1x Mounting bracket
2x Security screws	1x Security wrench	

LED Indicators and Fingerprint Reader/Keypad Sounds:


Status	Sounds	LED
In standby mode	--	1 Red flash/ 10 seconds
Enter programming mode	2 Beeps	Blue steady
In programming mode	--	Blue/Purple steady*
Exit programming mode	2 Beeps	1 Red flash and 1 blue flash
Successful operation	1-Sec long beep	1 Blue flash
Unsuccessful operation	3 Fast beeps	1 Red flash
Tamper alarm output	Rapid beeping	--

* Blue or purple LED depending on what stage of programming.

Important Notes:



IF USING THE FINGERPRINT READER/KEYPAD 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.

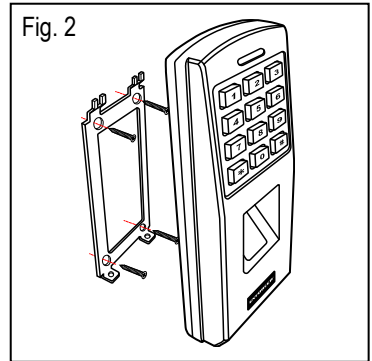
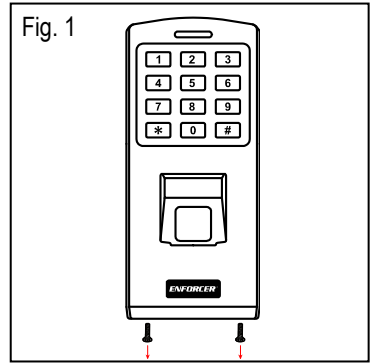


1. Always disconnect power before servicing the fingerprint reader/keypad. Do not apply power until all connection wiring is completed.
2. The fingerprint reader/keypad must be properly grounded. Use a minimum 22AWG wire connected to the common ground wire. Failure to do so may damage the unit.
3. All 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 fingerprint reader/keypad is located on pg. 11 of this manual. Be sure to store this manual in a safe place for future reference.

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Installation:

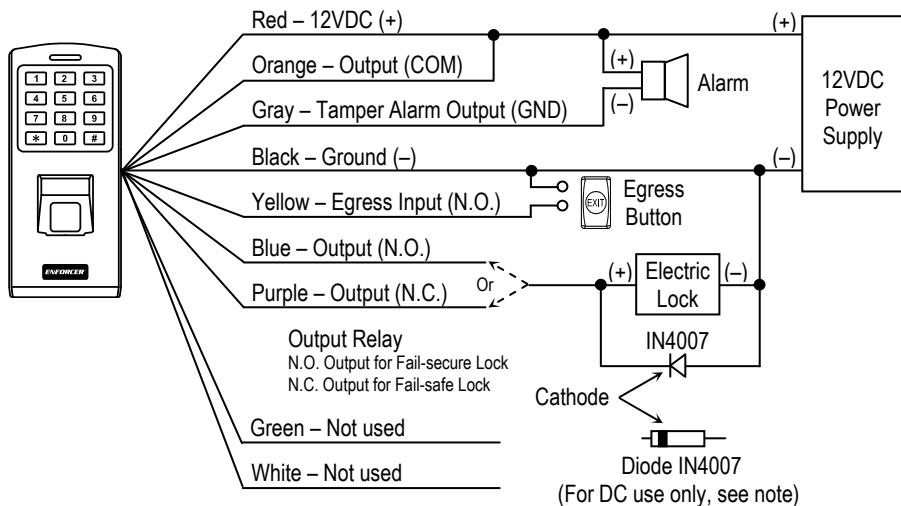
1. Find a suitable location to mount the fingerprint reader/keypad. Install it at a height at which most users will be able to easily operate the unit.
2. Run wiring through the wall to the fingerprint reader/keypad's location and through a hole cut in the wall which is large enough to allow the wiring to fit without crimping.
3. Using the included security wrench, unscrew the security screws located on the bottom of the fingerprint reader/keypad's mounting bracket (Fig. 1).
4. Carefully remove the fingerprint reader/keypad from the mounting bracket.
5. Thread the wiring through the center of the fingerprint reader/keypad's mounting bracket.
6. Install the mounting bracket using the included mounting screws and mounting screw anchors (if necessary). Ensure the correct orientation as shown in Fig. 2.
7. Connect the wires to the fingerprint reader/keypad according to "Wiring Diagram" below.
8. Finish assembly by attaching the fingerprint reader/keypad to the mounting bracket.



Wiring Diagram:

Connection Wires		
Color	Function	Description
Red	Power (+)	Connect to +12VDC power supply
Black (2 wires)	Ground (-)	Connect to Ground
Yellow	Egress Input	N.O. Pushbutton contact to ground. Press button to activate the output
Blue	Output N.O.	NO/NC/COM, relay output, max. 2A@12VDC
Orange	Output COM	
Purple	Output N.C.	
Gray	Tamper Alarm Output	Transistor ground output, max. 2.5A@12VDC. Switches to ground (-) when tamper switch activated.
Green	Not used	Not used
White	Not used	Not used

Sample Application:



NOTE: Connect the included diode as close as possible and in parallel with an electric strike. This absorbs possible electromagnetic interference to prevent operation of the strike from damaging the fingerprint reader/keypad. Do not connect a diode when using electromagnetic locks.

Getting Ready to Program:

The fingerprint reader/keypad is controlled by either a fingerprint or a user code.

- All fingerprints and user codes must have a unique User ID (between 1 and 1000). User IDs may be specifically selected or automatically assigned. It is important to record all User IDs.
- The initial master code is disabled after programming the first master fingerprint.

Fingerprints:

There are two types of fingerprint entries:

- Master fingerprints – Up to 5 fingerprints can be assigned as master fingerprints. Master fingerprints are used to enter programming mode.
- User fingerprints – Up to 500 fingerprints can be assigned as user fingerprints. User fingerprints are used to activate the relay.

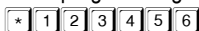
User Codes:

User codes may be 4~6 digits in length. Up to 500 user codes can be assigned. User codes are used to activate the relay.

Enter and Exit Programming Mode:

All programming of the fingerprint reader/keypad is done in programming mode.

1. Enter programming mode for the first time:



2. Enter programming mode after a master fingerprint has been programmed: Place the master fingerprint on the reader window for 1 second. The unit will beep twice and the LED will light blue to indicate the unit is in programming mode.

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Getting Ready to Program (continued):

3. Exit programming mode:

Press the **#** key or wait 15 seconds to exit automatically.

NOTE:

- **DO NOT DISCONNECT THE FINGERPRINT READER/KEYPAD FROM POWER WHILE IN PROGRAMMING MODE.** Disconnecting the unit while in programming mode may cause a memory error.
 - If you are unsure what mode the fingerprint reader/keypad is in, press the **#** key until the LED flashes red and the unit beeps 3 times. The fingerprint reader/keypad is now in standby mode.
-

Programming the Master Fingerprints:

The master fingerprints are used to enter programming mode. The master fingerprints **do not** serve as user fingerprints activating the output. To program the master fingerprints:

1. Enter programming mode using the initial master code:

*** 1 2 3 4 5 6**

2. Add the first master fingerprint:

*** 1 M M**

3. Add additional master fingerprints (if necessary):

M M

4. Exit programming mode:

#

NOTE:

- **M M** represents the master fingerprint, which must be presented twice.
 - The initial master code (*** 1 2 3 4 5 6**) is only valid until a master fingerprint is learned.
 - There can be up to five master fingerprints for the unit.
 - If the master fingerprint is unavailable, see "Manually Resetting the Master Fingerprint" on pg. 11.
 - If no activity within 15 seconds, the fingerprint reader/keypad will automatically exit programming mode.
-

Programming User Fingerprints:

When programming user fingerprints, use the following general formula:

A A A # U U

A - 1 to **5 0 0** – 500 unique User IDs for user fingerprints for the output.

U – User's fingerprint.

NOTE:

- For all programming functions, the fingerprint reader/keypad must first be in programming mode. To enter programming mode, present the master fingerprint once.
 - Entering a User ID followed by the **#** key allows the programmer to assign a particular User ID to the subsequent user fingerprint. If this step is omitted then the fingerprint reader/keypad will automatically assign the user fingerprint to the next available User ID.
 - Each User ID must be unique and cannot be repeated for multiple user fingerprints or codes.
 - **U U** represents the user fingerprint, which must be presented twice.
 - Exit programming mode by pressing the **#** key after all programming is completed.
-

Programming User Fingerprints (continued):

Examples:

1. Program a user fingerprint for User ID #10:

1 **0** **#** **U** **U**

2. Program a user fingerprint to an automatically assigned User ID (generally not recommended, since the User ID will be needed to delete a user when their fingerprint is not available):

U **U**

NOTE: In this example, the fingerprint reader/keypad will assign the next available User ID.

Programming User Codes:

When programming user codes, use the following general formula:

A **A** **A** **#** **B** **B** **B** **B** **B** **B** **#**

A – **5** **0** **1** to **1** **0** **0** **0** – 500 unique User IDs for user codes for the output.

B – User code – 4~6 digits long

NOTE:

- For all programming functions, the fingerprint reader/keypad must first be in programming mode. To enter programming mode, present the master fingerprint once.
- Each User ID must be unique and cannot be repeated for multiple user fingerprints or codes.
- Exit programming mode by pressing the **#** key after all programming is completed.

Examples:

1. Program user code **2** **2** **7** **5** for User ID #501:

5 **0** **1** **#** **2** **2** **7** **5** **#**

2. Program user code **1** **2** **3** **4** **5** for User ID #750:

7 **5** **0** **#** **1** **2** **3** **4** **5** **#**

Deleting User Fingerprints or User Codes:

To delete user fingerprints when the user is available, use the following general formula:

***** **2** **U**

***** **2** – Delete Users

U – User fingerprint

To delete user fingerprints when the user is unavailable, or to delete user codes, use the following general formula:

***** **2** **A** **A** **A** **#**

***** **2** – Delete Users

A – **1** to **1** **0** **0** **0** – User ID

To delete all users, use the following formula:

***** **2** **0** **0** **0** **0** **#**

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Deleting User Fingerprints or User Codes (continued):

NOTE:

- For all programming functions, the fingerprint reader/keypad must first be in programming mode. To enter programming mode, present the master fingerprint once.
- Exit programming mode by pressing the **#** key after all programming is completed.
- When deleting user fingerprints or user codes, the master fingerprint can be presented twice within 5 seconds instead of presenting the master fingerprint once and then pressing *** 2**. The LED will be lit red during this mode.

Examples:

1. Delete a user fingerprint for an available fingerprint:
*** 2 U** (present the user fingerprint to be deleted)
2. Delete a user fingerprint for an unavailable fingerprint assigned to User ID #1:
*** 2 1 #**
3. Delete a user code for User ID #501:
*** 2 5 0 1 #**
4. Delete all users:
*** 2 0 0 0 0 #**

Programming the Output Mode and Output Timing:

The relay can be programmed to toggle ON and OFF with a user fingerprint or user code (toggle mode), or to trigger for a programmed length of time up to 99 seconds before automatically turning OFF. The toggle or timed output can be used for locking or unlocking a door or for a variety of functions that can be controlled with the fingerprint reader/keypad.

When programming the output mode and time, use the following general formula:

*** 3 A A #**

*** 3** – Program Output Mode and Time

A – Output Mode and Time

Output Mode and Time:

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

NOTE:

- For all programming functions, the fingerprint reader/keypad must first be in programming mode. To enter programming mode, present the master fingerprint once.
- Exit programming mode by pressing the **#** key after all programming is completed.

Examples:

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

Resetting the Fingerprint Reader/Keypad:

When resetting functions on the fingerprint reader/keypad, use the following formula:

***** **9** **A**

***** **9** – Reset the Fingerprint Reader/Keypad

A – System Restore Options

System Restore Options:

- 0** – Reset the output mode and time to the default setting (5 seconds).
- 1** – Delete all user fingerprints, user codes, master fingerprints, and restore initial master code.
- 2** – Delete all master fingerprints and restore initial master code.

NOTE:

- For all programming functions, the fingerprint reader/keypad must first be in programming mode. To enter programming mode, present the master fingerprint once.
- Options **1** and **2** will restore the initial master code of *******123456**.
- Exit programming mode by pressing the **#** key after all programming is completed.

Examples:

1. Reset output mode and time to 5 seconds:

***** **9** **0**

2. Set all programming back to factory defaults:

***** **9** **1**

3. Delete all master fingerprints and restore initial master code:

***** **9** **2**

Manually Resetting the Master Fingerprint:

If the master fingerprint is unavailable, the following steps can be taken to reset the master code in order to re-enter programming mode.

1. Disconnect power from the fingerprint reader/keypad.
2. Hold down the **#** key.
3. While holding the **#** key, reconnect power.
4. After 5 seconds a long beep will sound, indicating the master fingerprints have been removed and the initial master code (*******123456**) has been re-enabled.

NOTE:


- See “Programming the Master Fingerprints” on pg. 8 for more detail on how to program the master fingerprints.
- Manually resetting the master fingerprints will not reset the fingerprint reader/keypad’s programming. It will only delete the old master fingerprints and return to the initial programming code.

Operating the Fingerprint Reader/Keypad:

- To operate using a fingerprint:
Place the finger on the fingerprint reader for one second to activate the relay.
- To operate using a user code:
Enter the user code and press the **#** key to activate the relay.

ENFORCER Fingerprint Reader and Keypad

Troubleshooting:

Unit does not enter programming mode with master fingerprint	<ul style="list-style-type: none">• Try a different finger (if more than one finger was originally programmed)• Manually reset the master fingerprints
Unit fails to accept a new fingerprint	<ul style="list-style-type: none">• Ensure the User ID assigned is between 1 and 500• Ensure the User ID has not been assigned to another user
Unit fails to accept a new user code	<ul style="list-style-type: none">• Ensure the User ID assigned is between 501 and 1000• Ensure the user code is between 4-6 digits long and not already assigned to another user
Unit fails to read a programmed fingerprint	<ul style="list-style-type: none">• Ensure the finger being presented is the same finger that was originally programmed• Press the finger evenly on the central area of the reader• Ensure the reader window is clean
Unit fails to respond to a programmed fingerprint or user code	<ul style="list-style-type: none">• Ensure the unit is in standby mode by pressing the  key until the LED flashes red

Also Available from SECO-LARM®:

Electromagnetic Locks



E-941SA-600 shown

Push-to-Exit Plates



SD-7202GC-PEQ shown

Electric Door Strikes



SD-995C shown

IMPORTANT: Users and installers of this product are responsible for ensuring this product complies with all national, state, and local laws and statutes related to monitoring and recording audio and video signals. SECO-LARM will not be held responsible for the use of this product in violation of any current laws or statutes.

FCC COMPLIANCE STATEMENT

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 UNDESIRE 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.

LIMITED 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.

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