Digital Access Keypad Manual

User Operation for the SK-1131-SQ

1. **Using the User Codes:**
   A. User codes operate the door (4-8 digits long).
   Press ⬚u⬚u⬚u⬚u
   B. The #⃞ key must be pressed also if the keypad is in manual-entry mode.
   Press ⬚u⬚u⬚u⬚u #⃞

2. **Using the Master Code:**
   The Master Code can be used to operate any output.
   Press ⬚x⬚x⬚x⬚x #⃞ 1⃞ (Relay output #1)
   Press ⬚x⬚x⬚x⬚x #⃞ 2⃞ (Relay output #2)
   Press ⬚x⬚x⬚x⬚x #⃞ 3⃞ (Relay output #3)

3. **Using the Inhibit/Lockout Code:**
   Please contact your installer for an explanation of inhibit mode and its operation.

4. **Using Duress Codes:**
   For a full explanation of duress codes and their uses, see pg. 12.

5. **Delete/Add/Change User and Master Code:**
   A. Enter the Master Code first, followed by the *⃞ key
   (If you forgot the master code, see page 15 for more information.
   Press ⬚x⬚x⬚x⬚x *⃞
   B. Changing/Adding Users:
   Press 1⃞ 00-99 (user ID) ⬚u⬚u⬚u⬚u (user code, 4-8 digits) #⃞ (for relay output #1)
   Press 2⃞ 0-9 (user ID) ⬚u⬚u⬚u⬚u (user code, 4-8 digits) #⃞ (for relay output #2)
   Press 3⃞ 0-9 (user ID) ⬚u⬚u⬚u⬚u (user code, 4-8 digits) #⃞ (for relay output #3)
   C. Deleting Individual Users:
   Press 1⃞ 00-99 (user ID) #⃞ (for relay output #1)
   Press 2⃞ 0-9 (user ID) #⃞ (for relay output #2)
   Press 3⃞ 0-9 (user ID) #⃞ (for relay output #3)
   D. Changing the Master Code:
   Press 0⃞ ⬚x⬚x⬚x⬚x #⃞
   E. To exit programming mode, press the *⃞ key.

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PIHAK1
MT_SK-1131-SQKeypad092810.pmd

SECO-LARM U.S.A., Inc.

ENFORCER®

SK-1131-SQ
Digital Access Keypad with 3 Outputs

MANUAL

Also available from SECO-LARM:

Indoor Keypad	Outdoor Keypads			
SK-1011-SQ	SK-1123-SQ	SK-1123-FQ	SK-2323-SDQ	SK-3123-SDQ

SLI® SECO-LARM®

Note: Model numbers that end with "Q" or that have a round green "Q" sticker signify RoHS-compliant products.

TABLE OF CONTENTS

INTRODUCTION

The SK-1131-SQ is the ideal keypad for office, commercial, and home security installations. This self-contained security keypad has built-in 5-Amp and 1-Amp relay outputs and a transistor ground output for maximum flexibility for connecting to electronic door strikes, door alarms, door chimes, alarm control panels, or other security and access control applications. The outputs can be programmed for timed (1-999 seconds) or ON/OFF operation.

The SK-1131-SQ can be programmed for up to 100 4-digit to 8-digit user codes for the primary output, and up to 10 4-digit to 8-digit user codes for each of the other two outputs. All programming and code information is stored in non-volatile EEPROM memory to protect the data in case of power loss.

DIMENSIONS
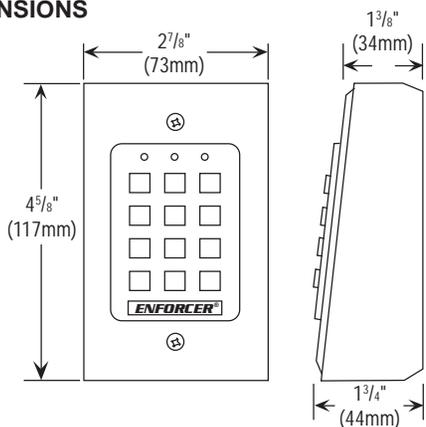
PARTS LIST

Keypad x 1
Back box x 1
Diode x 1
Installation screws x 2
Mounting screws x 2

REPROGRAM THE KEYPAD (CERTAIN DATA)

To change certain data in the keypad (such as to delete or change user codes), do the following:

1. Enter program mode by keying in the master code and the ✱ key:

    X X X X ✱ The keypad is now in the programming mode.

2. Use the programming instructions on page 13 and 14 to make any changes to the keypad's data.

3. Exit the programming mode by pressing the ✱ key.

REPROGRAM THE KEYPAD (COMPLETE DATA REFRESH)

Sometimes it may be necessary to completely erase all current data (except the master code) and input new data. An example of when this may be necessary is the sale of a protected building to a new owner. In such a situation, do the following:

1. Enter the programming mode by keying in the master code and the ✱ key, then enter the refresh code, 8 9 0 1 and the # key:

    X X X X ✱ The keypad is now in the programming mode.

    8 9 0 1 # All old data is cleared and the keypad is ready for new data.

    NOTE: The master code does NOT change.

2. Use the programming instructions on pages 13 and 14 to enter the keypad's data.

3. Exit the programming mode by pressing the ✱ key.

DELETE USER

To delete a user who has left the company or who no longer has authority to enter the protected area:

1. Enter program mode by keying in the master code and the ✱ key:

    X X X X ✱ The keypad is now in the programming mode.

2. Enter the output # and user D number and the # key:

    To delete user D 05 from output #1, press 1 0 5 # .

    To delete user D 1 from output #2, press 2 1 # .

    To delete user D 7 from output #3, press 3 7 # .

3. Exit the programming mode by pressing the ✱ key.

MASTER CODE BYPASS (DAP jumper)

If the master code is forgotten or does not work, use the DAP (direct access to program) jumper to override the forgotten code and permit direct entry into the programming mode as follows:

1. Disconnect the power supply.
2. Move the DAP jumper from OFF to ON.
3. Reconnect the power supply.
    The keypad will start beeping.
4. Move the DAP jumper back to the OFF position.
    The keypad will stop beeping as soon as the jumper is removed.
5. The keypad is now in the programming mode, ready to receive new programming data.
6. Re-program the keypad as shown starting on page 13.

NOTE -- A new master code may be programmed to replace the one that was lost or forgotten. Note that the sequence for replacing the old master code is as follows:

Option*	Key in new code	Confirm	Exit
0	X X X X	#	✱

*Zero "0" is for new master code only; see page 13 for other options.
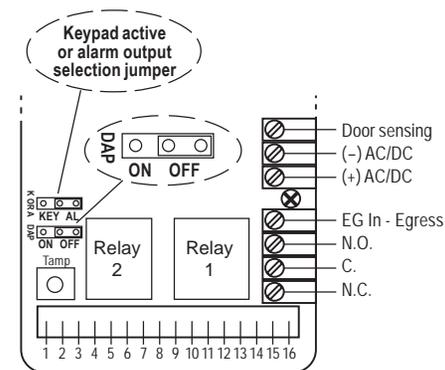
INSTALLER PROGRAMMING

These functions should only be used by professional installers, as incorrect entries can disable the entire keypad function.

Enter Programming Mode   (DEFAULT: [0][0][0][0])

Enter Master code	Confirm	Function
[X][X][X][X]*	[*]	Enter into programming mode

*Key in the Master Code.
Note: For first-time use, Master code is [0][0][0][0]

Data Refresh

Option	Confirm	Function
[8][9][0][1]	[#]	Clears all previously stored data.

Configure Relay Outputs   (DEFAULT: Momentary, 1-sec. output for all three outputs)

Option	Output time	Confirm	Function
[4][0]	1 to 999	[#]	Relay #1, momentary mode, from 1 to 999 seconds
[4][1]		[#]	Relay #1, shunt mode (ON/OFF)
[5][0]	1 to 999	[#]	Relay #2, momentary mode, from 1 to 999 seconds
[5][1]		[#]	Relay #2, shunt mode (ON/OFF)
[6][0]	1 to 999	[#]	Output #3, momentary mode, from 1 to 999 seconds
[6][1]		[#]	Output #3, shunt mode (ON/OFF)

Wrong Code Lockout   (DEFAULT: 10 tries / 30 seconds)

Option	# of tries	Confirm	Function
[7][0]			After 10 successive wrong codes, 30-second lockout
[7][1]			After 10 successive wrong codes, Duress activated
[7][2]	5 to 10	[#]	After 5 to 10 wrong codes, 15-min. lockout - Can reset with Master Code
[7][6][0][0]		[#]	None of the above

Door Forced-Open Alarm   (DEFAULT: Disabled)

Option	Code entry	Confirm	Function
[8][0]	[1]	[#]	Door forced-open alarm is enabled
	[0]	[#]	Door forced-open alarm is disabled

Output Activation Announcer   (DEFAULT: On)

Option	Code entry	Confirm	Function
[8][1]	[1]	[#]	1-sec. beep notifies the user to open the door when the output relay is activated.
	[0]	[#]	The beep is disabled, replaced by 2 short beeps for valid user codes.

User Code Entry Mode   (DEFAULT: Manual)

Option	Code entry	Confirm	Function
[8][2]	[1]	[#]	**Auto Entry Mode** is selected. The [#] key that follows the user code is NOT required in code entry. The User Codes MUST be set to the same digit length as the Master Code.
	[0]	[#]	**Manual Entry Mode** is selected. The [#] key that follows the user code is required in code entry. The User Codes can be 4-8 digits, but not necessarily all of the same length.

Keypress Beeps   (DEFAULT: On)

Option	Code entry	Confirm	Function
[8][3]	[1]	[#]	Keypad beeps when a key is pressed.
	[0]	[#]	Silent operation -- keypad does not beep when a key is pressed.

LED Flashes in Standby Mode   (DEFAULT: On)

Option	Code entry	Confirm	Function
[8][4]	[1]	[#]	Amber LED ON during standby mode.
	[0]	[#]	Amber LED OFF during standby mode.

Door Propped Open Alarm Timer   (DEFAULT: Off)

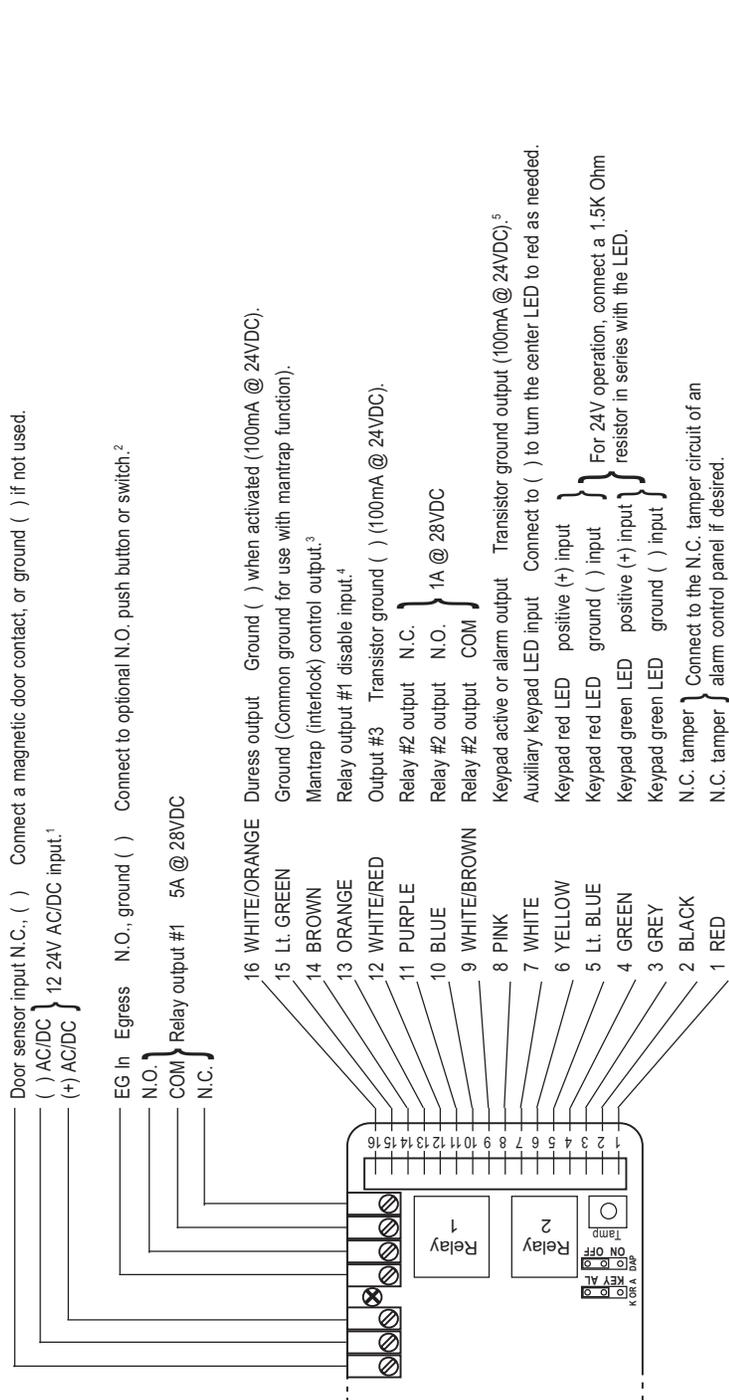| Option	Code entry	Confirm	Function
[9]	0	[#]	No door propped open alarm
	1 to 999	[#]	Allowable time from 1 to 999 seconds that the door can be left open before the alarm starts.

Exit Programming Mode

Confirm	Function
[*]	Exits programming mode, returns keypad to normal operations

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UNIQUE FEATURES

- **12-24V AC/DC universal power** – No programming or jumpers needed.
- **Mantrap** – Each keypad can be used as a stand-alone keypad. However, the mantrap feature uses two keypads to protect an area with two doors by ensuring that only one door is open at a time. With the mantrap interlock functions, when a user keys in the code to open one door, a signal is sent to disable the second keypad, thereby preventing access through the second door until the first door is closed.
- **Relay output #1 inhibit control** – Relay output #1 is typically used for a door strike. If the keypad is set to the "inhibited" mode, relay output #1 will not operate. This increases the security of the protected premises during the time it is not expected to be occupied, such as during evening or weekend hours. An authorized user can enable or disable the inhibit control by using the code for relay output #2 or output #3 at any time, depending on how installed.
- **Door forced open warning** – When used with an optional magnetic contact, the keypad beeps continuously for 1 minute if the door to the protected premises is forced open without using a valid user code. The warning can be stopped at anytime by keying in any output #1 user code.
- **Door propped open warning** – When used with an optional magnetic contact, the keypad beeps continuously if the door is propped open after the allowed open time. The allowable open time is programmable. The warning stops when the door is re-closed.
- **Auto or manual code entry checking:**
  o Auto code entry checking mode – When all the user codes have the same number of digits, the keypad will activate automatically when the code is entered. There is no need to press the "#" key. This is convenient for the users.
  o Manual code entry checking mode – The user codes can vary in number of digits, and the user must press the "#" key when finished entering the code. This increases security.
- **Keypad active output** – This NPN transistor open collector ground (-) output activates for 10 seconds when any key on the keypad is pressed. This can be used to trigger a video recorder or turn on a light, or to signal a guard that someone is entering the protected premises.
- **Alarm output** – When used with an optional magnetic contact, this NPN transistor open collector ground (-) output can be connected to trigger an optional alarm control panel if a protected door is forced open or propped open.
- **Door auto relock** – This can be programmed to relock an open door either when the programmed relock time expires or immediately after the door is closed, depending on which occurs first. This prevents unwanted "tailgate" entries, which can happen if an unauthorized person tries to follow an authorized person through the door.
- **Duress output** – This NPN transistor open collector ground (-) output can be used to trigger a silent alarm if an authorized user is forced under duress to use the keypad. The duress output is activated by adding 2 to the first digit of any user code for output #1. In this case, the protected door opens as it would normally, but a signal is quietly sent to a remote device to call for help without alerting the unauthorized person.
- **Backlit keypad** – The keypad is backlit to increase nighttime visibility. For convenience, the lighting intensity will increase for 10 seconds after any key is pressed.

WIRING — BASIC DIAGRAM

Terminal labels (bottom to top):
- 1 RED
- 2 BLACK — N.C. tamper: Connect to the N.C. tamper circuit of an alarm control panel if desired.
- 3 GREY — N.C. tamper
- 4 GREEN — Keypad green LED: ground ( ) input
- 5 Lt. BLUE — Keypad green LED: positive (+) input. For 24V operation, connect a 1.5K Ohm resistor in series with the LED.
- 6 YELLOW — Keypad red LED: ground ( ) input
- 7 WHITE — Keypad red LED: positive (+) input. Connect to ( ) to turn the center LED to red as needed.
- 8 PINK — Auxiliary keypad LED input
- 9 WHITE/BROWN — Keypad active or alarm output: Transistor ground output (100mA @ 24VDC).[5]
- 10 BLUE — Relay #2 output: COM
- 11 PURPLE — Relay #2 output: N.O. } 1A @ 28VDC
- 12 WHITE/RED — Relay #2 output: N.C.
- 13 ORANGE — Output #3: Transistor ground ( ) (100mA @ 24VDC).
- 14 BROWN — Relay output #1 disable input.[4]
- 15 Lt. GREEN — Mantrap (interlock) control output.[3]
- 16 WHITE/ORANGE — Duress output: Ground ( ) when activated (100mA @ 24VDC). Ground (Common ground for use with mantrap function).

Left side:
- Door sensor input N.C., ( ): Connect a magnetic door contact, or ground ( ) if not used.
- ( ) AC/DC: 12 24V AC/DC input.[1]
- (+) AC/DC
- EG In Egress / N.O.: Connect to optional N.O. push button or switch.[2]
- N.O. ground ( )
- COM } Relay output #1 5A @ 28VDC
- N.C.

Footnotes:
1. For DC, connect to a regulated power supply with correct polarity, + to +, to . For AC, polarity is not important.
2. Egress input: Connect to optional N.O. push button or switch inside the protected premises. Lets users inside the protected premises exit without using the keypad's code.
3. Mantrap control output: Outputs ground ( ) for five seconds after relay output #1 is activated, continues while the door is open.
4. Connect to ground ( ) to prevent relay output #1 from operating, or to the mantrap (interlock) control output of another keypad to disable output #1 while the other keypad is active.
5. Program for either the keypad active output (KEY on the K OR A jumper) or alarm output (AL on the K OR A jumper).

PREPARING TO PROGRAM THE KEYPAD

To program the SK-1131-SQ, first determine the following information:

1. The master code -- Allows the system administrator to program or operate the keypad.
2. The user code or codes -- Allows users to use the keypad's functions.
3. Configuration of the relays and outputs -- For relay output #1, relay output #2, and output #3, determine whether the output should operate from 1 to 999 seconds and then turn OFF (momentary mode), or turn ON/OFF via the code (shunt mode).
4. Result of improper code entry -- Choose between a 30-second code lockout, duress output, a 15-minute code lockout, or no reaction.

* Note: When ⊠⊠⊠⊠ appears in the instructions, it indicates master code entry.

GETTING STARTED

A master code is required to program the keypad. The default master code is set to "0000." To change the master code, go to page 15 and follow the instructions for "MASTER CODE BYPASS (DAP jumper).

Once the master code is set, review the programming options and decide exactly what the keypad will do, including the format of the user access codes as well as how the keypad responds via the relay output, buzzer and LEDs. Note that in every case the basic steps for programming are:

1. Enter the master code, followed by the ⊛ key, which puts you in programming mode.
2. Enter the programming codes defined in the various sections as needed, followed by the ⌗ key.
3. Enter the ⊛ key again to exit programming mode.

Note: A rapid string of 5 beeps and/or 5 LED flashes indicates an error, while 2 beeps indicates that the entry has been accepted.

USER PROGRAMMING

ENTER PROGRAMMING MODE

Enter Master code	Confirm	Function
⊠⊠⊠⊠	⊛	Enter into programming mode

Note: For first-time use, Master code is 0 0 0 0

ADDING OR CHANGING MASTER AND USER CODES

Option	User ID	Access code	Confirm	Function
0		4 to 8 digits	⌗	Master Code
1	00 to 99	4 to 8 digits	⌗	Up to 100 User Codes for relay output #1, with duress feature
2	0 to 9	4 to 8 digits	⌗	Up to 10 User Codes for relay output #2
3	0 to 9	4 to 8 digits	⌗	Up to 10 User Codes for output #3

Note: No user code may be the same as the master code.
Note: For User ID, key in the number of the user. For Access Code, type in the code for that particular user.

DELETE A USER

To delete a user who has left the company or who no longer has authority to enter the protected area:

1. Enter programming mode:

Enter Master code	Confirm	Function
⊠⊠⊠⊠	⊛	Enter into programming mode

2. Delete code:

Option	User ID	Confirm	Function
1	00 to 99	⌗	Deletes specific user ID from output #1
2	0 to 9	⌗	Deletes specific user ID from output #2
3	0 to 9	⌗	Deletes specific user ID from output #3

EXIT THE PROGRAMMING MODE BY PRESSING THE "⊛" KEY

PROGRAMMING NOTES

1. Master Code: The SK-1131-SQ comes pre-programmed with the Master Code set at 0000. Additional codes and/or data should be programmed at the owner's discretion. However, to ensure security, program a new personal Master Code to replace the factory-set Master Code as soon as possible.

2. Factory defaults:

Master code	0000	Door forced open alarm	disabled
User code length	4 to 8 digits	Output activation announcer	ON
Main relay output time	1 second	User code entry mode	manual
Auxiliary relay output time	1 second	Keypress beep	ON
Transistor ground output time	1 second	Door propped open alarm	OFF
Wrong code lockout	10 tries / 30 sec.	Silent operation	OFF

3. Code operation: User codes are each four to eight digits and are assigned to two-digit IDs. If all the codes have the same number of digits, the keypad can be programmed for whether the ⊞ key must be used or not after entering the code (see programming, option 820 or 821, page 14).
The administrator can easily delete the code of one user via the two-digit ID, if the user is no longer authorized to enter a protected area, without the need to teach the new code to all the other users.
Relay output #1 allows up to 100 user codes, while relay output #2 and output #3 allow up to 10 user codes each.

4. Using Duress Codes: Duress codes are used to activate a separate device silently to alert a guard or other personnel that a user is operating the keypad under threat. The keypad operates as normal, but a signal is sent to alert others. Duress code is for output #1 only.
Duress codes do not need to be programmed. All user codes are automatically turned into duress codes by increasing the first digit of a user code by the number 2. The code is entered the same way as a regular user code.
For example:
User code 4468 can be entered as duress code 6468
User code 9843 can be entered as duress code 1843
User code 8181 can be entered as duress code 0181
NOTE: If a user code is programmed, its duress code is unique and cannot be programmed as another user code. For example:
If user code 4468 is programmed, its duress code of 6468 is automatically programmed. A user code of 6468 cannot be programmed.

LED INDICATORS

Green LED – Does not have a pre-determined function. Instead, connect to a switch or output via the grey and green wires in the wire harness.

Red LED – Does not have a pre-determined function. Instead, connect to a switch or output via the light blue and yellow wires in the wire harness.

Auxiliary red/green LED – Flashes green to show the keypad status (see below). It also lights red when the white wire in the wire harness is connected to ground (-) to show, for example, that an output is activated.

BUZZER AND LED SIGNALS

The keypad's built-in buzzer and the auxiliary red/green LED can signal the following:

STATUS	BUZZER TONES*	AUX. LED FLASHES
1. In programming mode	- - -	ON
2. Successful key entry	1 beep	1 flash
3. Successful code entry	2 beeps	2 flashes
4. Unsuccessful code entry	5 beeps	5 flashes
5. DAP jumper not replaced	Continuous beeps	Continuous flashes
6. In standby mode	- - -	1 flash in 2-sec. intervals
7. Output relay activated	1-sec. long beep**	- - -

NOTE: * The buzzer can be disabled through programming option 83, ref. pg. 14.
** The output relay activated beep can be disabled through programming option 81, ref. pg. 14.
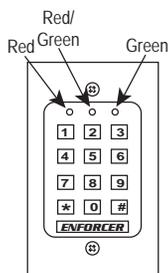
SPECIFICATIONS

Power:
- Operation voltage -- 12-24 Volts AC/DC. No jumper needed to set voltage.
- Stand-by current drain -- 10mA @12VDC.
- Active current drain (press keypad key) -- Under 30mA.
- Active current drain (one relay activated) -- Under 80mA.
- Active current drain (two relays activated) -- Under 130mA.

Outputs:
- Relay output #1 -- 5A @ 28VDC, Form "C", N.O./C./N.C., programmable for 1 to 999 second timed output or shunt (start/stop) output. Three terminals.
- Relay output #2 -- 1A @ 28VDC, Form "C", N.O./C./N.C., programmable for 1 to 999 second momentary output or shunt (start/stop) output. Three wires.
- Output #3 -- Transistor ground, max. 100mA @ 24VDC, programmable for 1 to 999 second momentary output or shunt (start/stop) output. Single wire.
- Tamper output -- 50mA @ 12VDC, N.C. output. Connect to tamper circuit of alarm control panel. Two wires.
- Keypad active or alarm output -- Transistor ground, max. 100mA @ 24VDC. Switches to ground (-) for 10 sec. when a key is pressed (keypad active output), or switches to ground (-) to indicate a door was forced open or propped open (alarm output). Single wire.
- Mantrap (interlock) control output -- Outputs ground (-) for five seconds after relay output #1 is activated, continues while the door is open. Use to disable a second keypad during this time. Single wire.
- Ground output -- Steady ground (-), 100mA @ 24VDC. Single wire.
- Duress output -- Transistor ground (-), 100mA @ 24VDC. Single wire.

Inputs:
- Power -- 12-24Volts AC/DC. Two wires.
- Egress -- N.O., ground (-). Single wire.
- Door sensor input -- N.C., ground (-). Connect to an N.C. magnetic contact to show if door is opened or closed, or connect to ground (-) if not used. Single wire.
- Green LED input -- Connect to operate green LED as needed. Two wires.
- Red LED input -- Connect to operate red LED as needed. Two wires.
- Auxiliary LED input -- Connect to (-) to turn the center LED to red as needed. Single wire.
- Relay output #1 disable input -- Connect to ground (-) to prevent relay output #1 from operating, or to the mantrap (interlock) control output of another keypad to disable output #1 while the other keypad is active. Single wire.

Code Operation:
- Auto or manual code entry. Up to 100 user codes for relay output #1, up to 10 user codes for relay output #2, up to 10 user codes for output #3. 111,110,000 possible user code combinations.

Auto refresh time during code entry:
- Max. 10 seconds to enter each digit.
- Max. 30 seconds to enter each code.
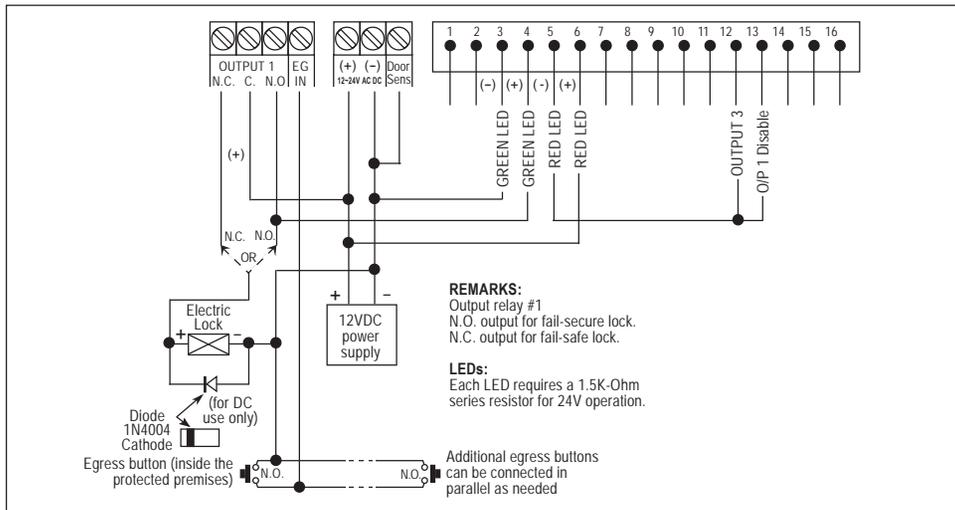
Dimensions (keypad with back box):
- 4-5/8" x 2-7/8" x 1-7/8" (117 x 74 x 48 mm).

Weight (keypad with back box):
- 6.3 oz. (180 grams).

WIRING:

Example Wiring, with Inhibit Control Authorized

REMARKS:
Output relay #1
N.O. output for fail-secure lock.
N.C. output for fail-safe lock.

LEDs:
Each LED requires a 1.5K-Ohm series resistor for 24V operation.

Note:

- Connect a 1N4004 diode as close as possible to and in parallel with the DC-powered electromagnetic or electric lock. This absorbs possible electromagnetic interference to prevent operation of the lock from damaging the keypad. A 1N4004 is not required for AC-powered locks.
- Connect the ground (-) terminal of the keypad to earth to prevent electrostatic discharge from damaging the keypad.
- The connection of relay output #1 disable to output #3 as shown above is optional. When so wired, output #3 is the inhibit control. To use, program output #3 for shunt on/off operation. When output #3 is ON, relay output #1 will not work. For example, this can be used to prevent users from entering the protected premises during the evening or weekend. See programming option 61.
- As wired, the green LED lights while relay output #1 is activated to activate the lock.
- As wired, the red LED lights to show that relay output #1 is disabled by the activation of output #3.
- Tape all unused wires to prevent short circuits.

WARNING:

- If the inhibit control is used, all personnel must exit the protected premises before output #3 is activated. Otherwise, personnel in the protected premises will not be able to exit until output #3 is turned OFF.
- The user code for output #3 in this case should be given only to personnel authorized to enter the premises any time. It should not be given to other users.

WIRING:

Auxiliary Accessories

TAMPER N.C.

WIRE HARNESS

DURESS OUTPUT

WIRE HARNESS

DOOR SENSING

Required for:
- Door Auto Relock
- Door Forced-open Alarm
- Door Propped-up Alarm
- Mantrap (Interlock) Control
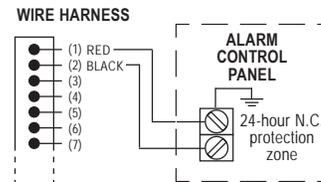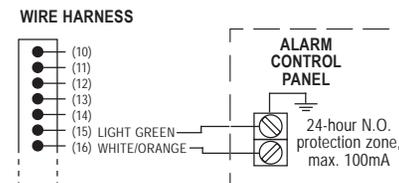
KEY ACTIVE or ALARM OUTPUT

OR
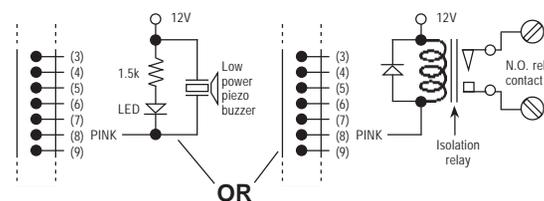
(See page 15 for jumper selection)

The Key Active Output will switch to ground (-) for 10 seconds whenever a key is touched. Use to turn ON an LED and/or a small buzzer to notify a guard, or to energize a relay to switch ON lights or CCTV camera.

Only one connection option is recommended. Make sure the current does not exceed the maximum rating of 100mA.

An external power supply and isolation relay are necessary to drive high power devices such as lights or CCTV cameras.

RELAY OUTPUT #2 -- Example, to shunt an alarm N.C. zone

WIRE HARNESS **WIRE HARNESS**
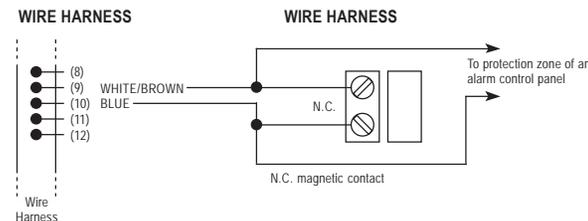
Use Normally Open (N.O.) output contact to shunt a Normally Closed (N.C.) protection zone of an alarm system.

Set relay output #2 to Start / Stop mode (programming option 51)

WIRING:

Example Wiring, Mantrap Using Two Keypads

DOOR 1

OUTPUT 1 — N.C. C. N.O. | EG IN | (+) (–) 12–24V AC/DC | Door Sens

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

(+)

N.C. N.O.
OR

N.C

Electric Lock + –

Door 1 sensor

12VDC power supply

Diode 1N4004 Cathode (for DC use only)

Egress button (open door 1 from inside). Additional egress buttons can be connected in parallel as needed.

N.O.

GREEN LED (–)
GREEN LED (+)
To (–) GND
To O/P 1 N.O.

O/P 1 Disable
Mantrap control
Common GND

REMARKS:
Output relay #1
N.O. output for fail-secure lock.
N.C. output for fail-safe lock.

LEDs:
Each LED requires a 1.5K-Ohm series resistor for 24V operation.

DOOR 2

OUTPUT 1 — N.C. C. N.O. | EG IN | (+) (–) 12–24V AC/DC | Door Sens

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

(+)

N.C. N.O.
OR

N.C

Electric Lock + –

Door 2 sensor

12VDC power supply

Diode 1N4004 Cathode (for DC use only)

Egress button (open door 2 from inside)

N.O.

GREEN LED (–)
GREEN LED (+)
To (–) GND
To O/P 1 N.O.

O/P 1 Disable
Mantrap control
Common GND

REMARKS:
Output relay #1
N.O. output for fail-secure lock.
N.C. output for fail-safe lock.

LEDs:
Each LED requires a 1.5K-Ohm series resistor for 24V operation.

Interlock -- Each keypad can be used as a stand-alone keypad. The mantrap feature is for a protected area with two doors to ensure only one door is open at a time. With the mantrap feature, when a user keys in the code to open one door, a signal is sent to the second keypad to disable it, thereby preventing access through the second door until the first door is closed.

Note: *PLEASE ALSO REFER TO THE NOTES ON PAGE 6 FOR MORE GENERAL INFORMATION.*

- 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 entrances to the protected premises.
- The function of the red and green LEDs depends on how they are connected.
- Combine this wiring diagram with the diagram on page 7 if connection to an alarm control panel is required.
- Connect output #3 to relay output #1 disable as shown on page 6 if inhibit control is required.
- To use the mantrap feature:
  o Use either the keypad from outside or the egress button from inside the protected premises to open one of the two doors.
  o While the first door is opened, the first keypad sends a signal to the second keypad to prevent the second keypad from being used to open the second door.
  o After the first door is closed, both keypads are ready to use.

WIRING:

Example Wiring, with Connection to Lock Device and Alarm Arm/Disarm

OUTPUT 1 — N.C. C. N.O. | EG IN | (+) (–) 12–24V AC/DC | Door Sens

(+)

N.C. N.O.
OR

Electric Lock + –

12VDC power supply

Diode 1N4004 Cathode (for DC use only)

REMARKS:
Output relay #1
N.O. output for fail-secure lock.
N.C. output for fail-safe lock.

Egress button (inside the protected premises) N.O.   N.O. Additional egress buttons can be connected in parallel as needed

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

AUX LED

OUTPUT
O/P 1 DISABLE

ALARM CONTROL PANEL

WHITE/ORANGE	N.O.	Duress -- To 24-hour N.O. zone
LIGHT GREEN	(–)	Com gnd (–) of keypad & alarm system
PURPLE	N.C.	Relay output #2 Alarm arm/disarm control –
BLUE	N.O.	Consult alarm system manual for how
WHITE/BROWN	COM	to connect for N.C. or N.O. operation
YELLOW	(+)	Red LED
LIGHT BLUE	(–)	
GREEN	(+)	Green LED
GREY	(–)	
BLACK	N.C.	Tamper --
RED		To a 24-hour N.C. zone

LEDs: For alarm status indication. Each LED requires a 1.5K-Ohm series resistor for 24V operation.

Note:

PLEASE ALSO REFER TO THE NOTES ON PAGE 6 FOR MORE GENERAL INFORMATION.

- The electromagnetic or electric door lock operation is the same as page 6, except the LED outputs have changed.
- The function of the red and green LEDs depends on how they are connected to the alarm control panel.
- Relay output #2 controls the arm/disarm of the alarm control panel. Consult the alarm control panel manual for more information.
- Connect the duress output to a 24-hour N.O. zone and the tamper output to a 24-hour N.C. zone on the alarm control panel.
- The connection of relay output #1 disable to output #3 as shown above is optional. When so wired, output #3 is the inhibit control. To use, program output #3 for shunt on/off operation. When output #3 is ON, relay output #1 will not work. For example, this prevents users from entering the protected premises during the evening or weekend. See programming option 61. In this case, the center auxiliary LED changes from flashing green to steady red to show that relay output #1 is disabled by the activation of output #3.
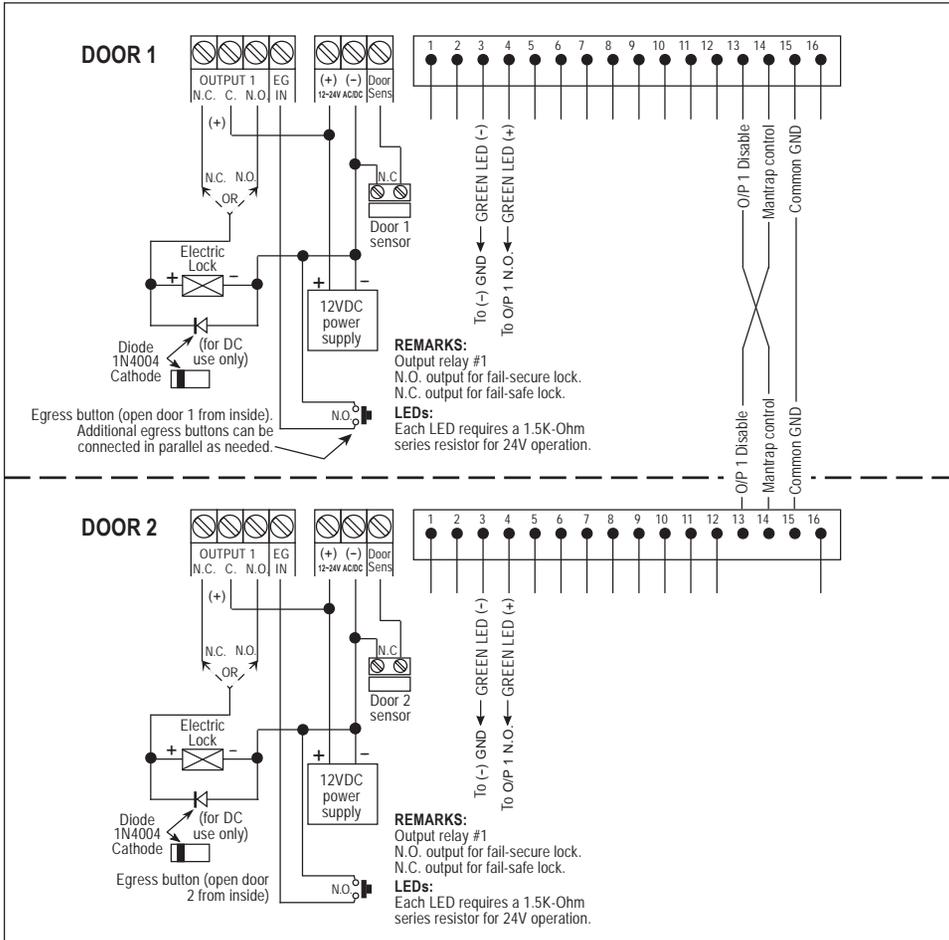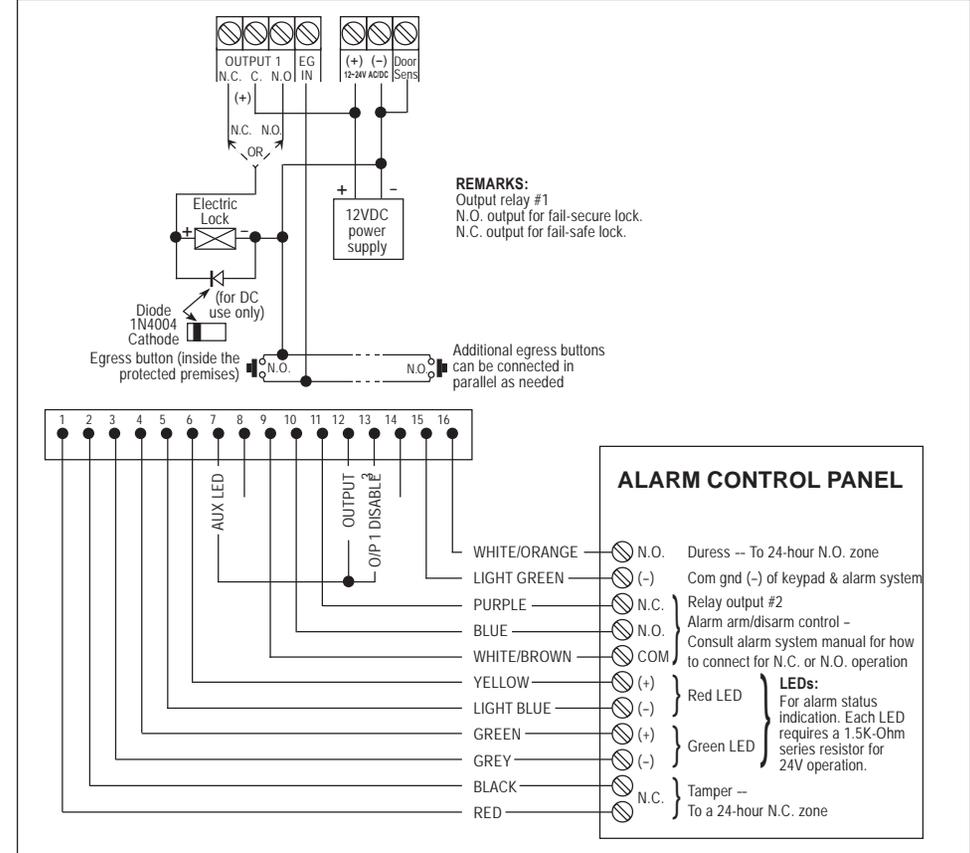- The keypad's light green wire connects to the ground (–) wire of the alarm control panel to enable the two to work together.

SK-1131-50 - User Control Chart

Relay Output #1: Output: Shunt / Momentary (_____ secs.) Programmed For: _____

USER ID	User Name	Access Code
00	SAMPLE - John Doe	54321
00		
01		
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USER ID	User Name	Access Code
00	SAMPLE - John Doe	54321
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99		

Relay Output #2: Output: Shunt / Momentary (_____ secs.) Programmed For: _____

0	5
1	6
2	7
3	8
4	9

Output #3: Output: Shunt / Momentary (_____ secs.) Programmed For: _____

0	5
1	6
2	7
3	8
4	9

Note: copy this sheet to use for your installations.