

DELETE USER (MULTI-USER MODE)

If you need 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 your personal master code and the **[*]** key:

[3][2][6][9][*] The keypad is now in the programming mode.

2. Enter the user ID number and the **[#]** key:

If you want to delete user ID 05 from output 1, press **[1][0][5][#]**.

If you want to delete user ID 1 from output 2, press **[2][1][#]**

DAP JUMPER (SYSTEM RESET) (Fig. 1, page 3)

If the personal master code is forgotten, use the DAP jumper to override the forgotten code and permit direct entry into the programming mode as follows:

1. Disconnect the power supply.
2. Switch the DAP jumper from OFF to ON.
3. Reconnect the power supply. The keypad will start beeping.

4. Switch the DAP jumper back to the OFF position. The keypad will stop beeping.

5. The keypad is now in the programming mode, ready to receive new data.

6. Re-program the keypad as shown above, starting with the personal master code.

Note: This will erase all user codes except the master code and reset the keypad to default settings.

SPECIFICATIONS

- Operation voltage — 12VDC (10~14VDC)
- Stand-by current drain — 4mA at 12VDC
- Active current drain:
 - Press keypad key — Under 20mA
 - If one relay is activated — Under 40mA
 - If both relays are activated — Under 80mA
- Duress output — NPN transistor open collector, switches to ground (-) when activates, 150mA, 25VDC max.
- Codes available:
 - Master code, 4 to 8 digits
 - User code #1 — 4 digits (single-user mode) or 4 to 8 digits (multi-user mode) per user code, up to 100 user codes in the multi-user mode
 - User code #2 — 4 digits (single-user mode) or 4 to 8 digits (multi-user mode) per user code, up to 10 user codes in the multi-user mode
 - Duress code — To trigger silent alarm if forced to disarm alarm under duress
 - Egress code — Connect to push button inside the protected area to allow exiting the protected area without using the keypad code
 - Quick code — 2-digit version of user code for easy entry/exit
- Code combinations:
 - Single-user mode — 10,000 possible combinations
 - Multi-user mode — Over 100 million possible combinations
- Relay outputs:
 - Relay output #1 — 5A, 30VDC max., programmable for 1 to 999 second momentary output or shunt (stop/start) output, programmable N.O./N.C.
 - Relay output #2 — 1A, 30VDC max., programmable for 1 to 999 second momentary output or shunt (stop/start) output, programmable N.O./N.C.
- LEDs:
 - Amber (power mode) — Flashes to indicate power is connected to keypad
 - Green (relay #1 status) — Turns ON to show when relay #1 is activated
 - Red (relay #2 status) — Turns ON to show when relay #2 is activated
- Dimensions (keypad with back box) — $4\frac{5}{8}$ " x $2\frac{7}{8}$ " x $1\frac{7}{8}$ " (117 x 74 x 48 mm).
- Weight (keypad with back box) — Approx. 6.2 oz (175g) net, 7.9 oz (225g) gross.

INSTALLATION MANUAL

ENFORCER[®]

SK-983A 100



Digital Access Keypad



SLI[®]

SECO-LARM[®] U.S.A., INC.

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Irvine, California 92606

FILE: MT_983A100.P65/JUL2002

SECO-LARM's policy is one of continual development and improvement. For this reason, SECO-LARM reserves the right to change specifications without notice.

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MT_983A100.pmd

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INTRODUCTION

The SK-983A100 is the ideal keypad for office and home security installations. It is a self-contained security keypad with one built-in 5A relay and one built-in 1A relay for electric door strike, door alarm, door chime, or other security and access control applications. The outputs can be programmed for momentary or ON/OFF operation.

With its EEPROM memory, the keypad's programmed data is saved in case of power failure. Security is assured with over 100 million possible combinations for the master, user, duress, and quick codes. Other security features include duress output and a built-in tamper switch. For convenience, the SK-983A100 also supports egress input (a push-button switch inside the protected area for easy exit when one-way security is sufficient).

ALSO AVAILABLE FROM SECO-LARM



SK-983A
(2-User
Keypad)



Push-to-Exit
Plates



Electromagnetic
Locks



Door Strikes



Power
Supplies



RF Transmitter &
Receiver Sets

- Super User Code — The personal master code also serves as a super user code, which allows this single code to operate all outputs:

<input type="text" value="3289#1"/>	Activate output #1 for 1 second,	<input type="text" value="3289#2"/>	Start (or stop) output #2
-------------------------------------	----------------------------------	-------------------------------------	---------------------------
- Duress code — If someone is forced to activate the keypad under duress, that user can add "2" to the first digit of the code (i.e., if the first digit is "1", it becomes "3", or, if "8", it becomes "0"). This will activate both output #1 and the duress output.

<input type="text" value="0321#"/>	If user code is 8321, this activates output #1 and duress output
<input type="text" value="31223#"/>	If user code is 11223, this activates output #1 and duress output
<input type="text" value="53221#"/>	If user code is 33221, this activates output #1 and duress output
- Quick code — Quick code is the first two digits of the user code. If user code 1 or 2 have been programmed in the shunt mode with quick code, users can activate the corresponding output #1 or #2 by keying in only the first two digits of their user codes. However, the entire user code must be pressed to deactivate the output. For example, if the user code is 8321, then the quick code is 83:

<input type="text" value="83#"/>	Output #1 is activated,	<input type="text" value="8321#"/>	Output #1 is deactivated
<input type="text" value="68#"/>	Output #2 is activated,	<input type="text" value="6854#"/>	Output #2 is deactivated
- Wrong code entry — If the keypad was programmed to lockout user codes if multiple incorrect codes are entered, either wait until the wrong code time period expires, or key in the master code during the lockout period.

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 your personal master code and the key:

<input type="text" value="3289*"/>	The keypad is now in the programming mode.
------------------------------------	--
2. Use the programming chart 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 personal master code) and input new data. Examples of when this may be necessary include the sale of the protected building to a new owner, or the need to switch from single-code mode to multi-code mode. In such a situation, do the following:

1. Enter the programming mode by keying in your personal master code and the key, then enter the refresh code and the key:

<input type="text" value="3289*"/>	The keypad is now in the programming mode.
<input type="text" value="8900#"/>	All old data is cleared, and the keypad is in single-user mode, ready for new data.*
<input type="text" value="8901#"/>	All old data is cleared, and the keypad is in multi-user mode, ready for new data.*

*Choose one mode or the other.

NOTE: The personal master code does NOT change.

2. Use the programming chart to enter the keypad's data.
3. Exit the programming mode by pressing the key.

PROGRAMMING THE KEYPAD (EXAMPLE, USING MULTI-USER MODE)

In this example, the following data will be stored in the keypad:

- Set to multi-user mode
- Change the factory master code 0000 to a personal master code 3289
- Set user ID 01 for output #1 to 8321
- Set user ID 02 for output #1 to 11223
- Set user ID 03 for output #1 to 33221
- Set user ID 0 for output #2 to 6854
- Set user ID 1 for output #2 to 54321
- Set relay #1 output to momentary mode, 1 second
- Set relay #2 output to shunt mode, without Quick Code
- Set the keypad to lock 15 for minutes after 10 consecutive wrong code inputs

Programming — Enter the data as follows:

- Enter the programming mode with the factory-set master code.
- Set for multi-user mode (skip if already in multi-user mode).
- 3289 has been stored as the new personal master code.
- 8321 has been stored as the user code for user ID 01 for output #1
- 11223 has been stored as the user code for user ID 02 for output #1.
- 33221 has been stored as the user code for user ID 03 for output #1.
- 6854 has been stored as the user code for user ID 0 for output #2.
- 54321 has been stored as the user code for user ID 1 for output #2.
- Relay output #1 set to momentary mode with 1-second output.
- Relay output #2 set to shunt mode, without Quick Code.
- Keypad will lock 15 min. after 10 consecutive wrong code inputs.
- Exit programming mode, with all desired data stored.

NOTE: If you make a mistake, press the to cancel, or wait 10 seconds, then re-enter.

USING THE KEYPAD (EXAMPLE, USING MULTI-USER MODE)

- Activate keypad output #1 — Enter any output #1 user code and validate with key:
 - Output #1 activates for 1 second.
 - Output #1 activates for 1 second.
 - Output #1 activates for 1 second.
- Activate keypad output #2 — Enter any output #2 user code and validate with key:
 - Start (or stop) output #2.
 - Start (or stop) output #2.

WIRE CONNECTIONS

- Power connection (two terminals):
 - (+) terminal – +12VDC input, to (+) terminal of a 12VDC regulated power supply.
 - (-) terminal – Ground input, to (-) terminal of a 12VDC regulated power supply.
 - Important** — Connect only to a regulated power supply to help prevent code lockouts.
 - Relay #1 output (two terminals) – 5.0A dry relay output, with two terminals. Use for door strike or alarm control panel arm/disarm.
 - Programmable for momentary or shunt (ON/OFF) operation – See page 8.
 - Programmable for N.O. or N.C. operation:
 - For N.O. operation, connect yellow wire jumper to "N.O." pin (factory default).
 - For N.C. operation, connect yellow wire jumper to "N.C." pin.
 - Relay #2 output (two terminals) – 1.0A dry relay output, with two terminals. Use to arm/disarm an alarm control panel or to trigger the 24-hour emergency trigger.
 - Programmable for momentary or shunt (ON/OFF) operation – See page 8.
 - Programmable for N.O. or N.C. operation:
 - For N.O. operation, connect "O/P2" jumper to "N.O." (factory default).
 - For N.C. operation, connect "O/P2" jumper to "N.C."
- Important** — Connect the included 1N4004 diode in parallel to the electric strike or magnetic lock (see fig.2).
- TAMPER N.C. (two terminals) — N.C. contact when the keypad is secured on the back box. The contact opens when the keypad is separated from the box. Connect to the 24-hour zone of an alarm system if necessary.
 - DUR (one terminal) — Duress output. Outputs a transistor ground when the Duress Code is entered. Connect to activate an alarm control panel (silent alarm is suggested) or telephone dialer. Output: Ground (-) output, 100mA, 25VDC max.
 - (-) GND and EG (egress button, two terminals) — Connect to an N.O. momentary push button, if required. Allows users to bypass the security code by pushing the button, which activates the relay #1 output. This button is normally put inside the protected premises near the door to allow those inside the protected premises to exit without keying in the code. Leave these terminals unconnected if the egress button is not used.

Figure 1:
Wiring Diagram

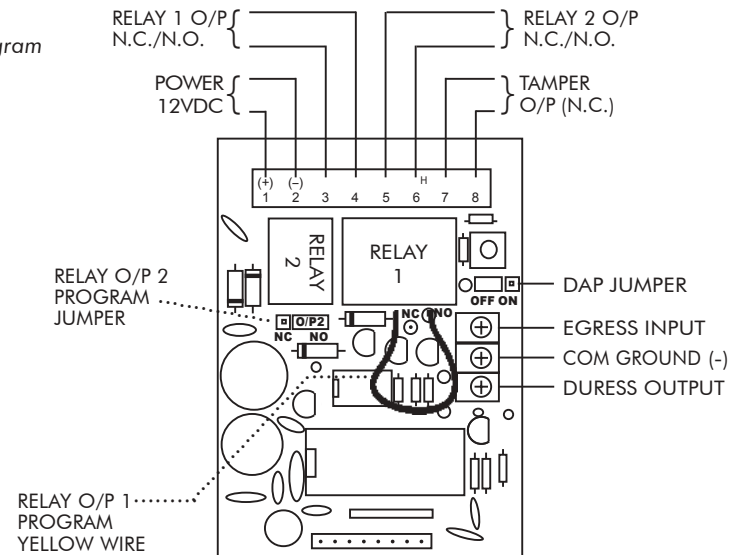
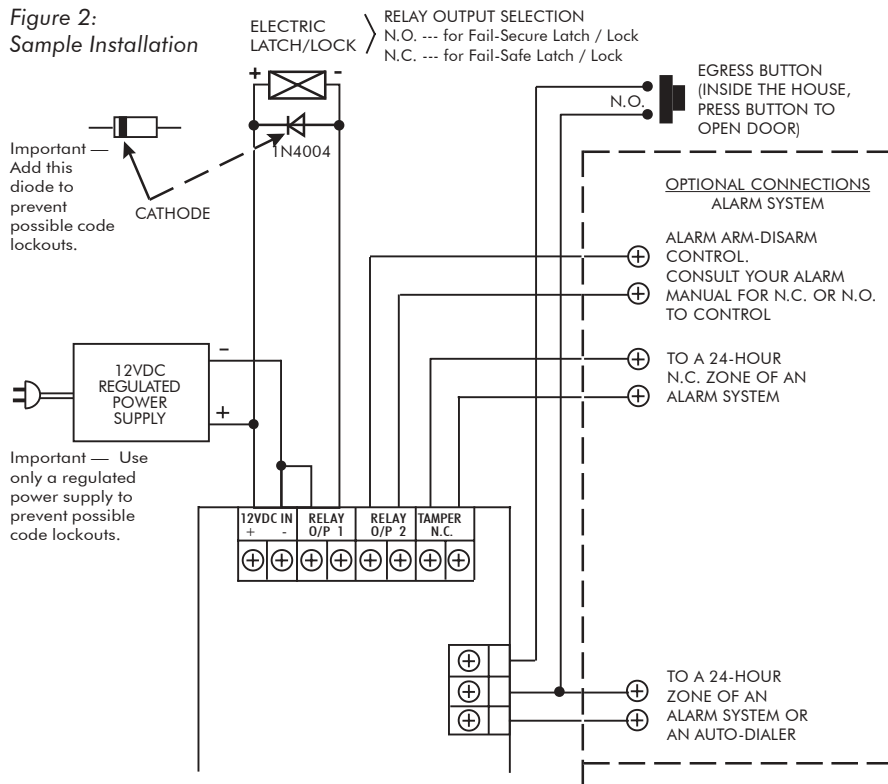


Figure 2:
Sample Installation



VISIBLE AND AUDIBLE INDICATORS

- **AMBER** — Flashes to indicate the keypad is connected to power. Also flashes once with each beep of the buzzer.
- **GREEN** — Lights ON when relay #1 is activated.
- **RED** — Lights ON when relay #2 is activated.
- **Built-in buzzer** — Sounds to indicate key press and code entry, as shown in fig. 3.

Figure 3:
Audible Indicators

Buzzer tones	STATUS
none	In programming mode
1 beep	Successful key entry
2 beeps	Successful code entry
5 beeps	Unsuccessful code entry
Continuous beeps	DAP jumper not replaced
None	Standby mode

Note: The amber LED flashes once with each beep.

PROGRAMMING THE KEYPAD (EXAMPLE, USING SINGLE-USER MODE)

In this example, the following data will be stored in the keypad:

- Set to single-user mode
- Change the factory master code 0000 to a personal master code 3289.
- Set output #1 user code to 8321.
- Set output #2 user code to 6854.
- Set relay #1 output to momentary mode, 1 second.
- Set relay #2 output to shunt mode, without Quick Code.
- Set the keypad to lock for 15 minutes after 10 consecutive wrong code inputs.

Programming — Enter the data as follows:

- Enter the programming mode using the factory-set master code.
- Set for single-user mode (skip if already in single-user mode).
- 3289 has been stored as the new personal master code.
- 8321 has been stored as the user code for output #1.
- 6854 has been stored as the user code output #2.
- Relay output #1 set to momentary mode with 1-second output.
- Relay output #2 set to shunt mode, without Quick Code.
- Keypad will lock 15 min. after 10 consecutive wrong code inputs.
- Exit programming mode, with all desired data stored.

Note: If you make a mistake, press the to cancel, or wait 10 seconds, then re-enter.

USING THE KEYPAD (EXAMPLE, USING SINGLE-USER MODE)

- Operate the keypad — To activate the relay outputs:
 - Activate output #1 for 1 second, Start (or stop) output #2.
- Super User Code — The personal master code also serves as a super user code, which allows this single code to operate all outputs:
 - Activate output #1 for 1 second, Start (or stop) output #2.
- Duress code — If someone is forced to activate the keypad under duress, that user can add "2" to the first digit of the code (i.e., if the first digit is "1", it becomes "3", or, if "8", it becomes "0"). This will activate both output #1 and the duress output.
 - If the user code is 8321, this activates output #1 and duress output.
- Quick code — The quick code is the first two digits of the user code. If user code 1 or 2 have been programmed in the shunt mode with quick code, users can activate the corresponding output #1 or #2 by keying in only the first two digits of their user code. However, the entire user code must be pressed to deactivate the output. For example, if the user code is 6854, then the quick code is 68:
 - Output #2 is activated, Output #2 is deactivated.
- Wrong code entry — If the keypad was programmed to lockout user codes if multiple incorrect codes are entered, either wait until the wrong code time period expires, or key in the master code during the lockout period.

Figure 4:
Programming the SK-983A100 Keypad

Start the Program

Enter Master code	Validation	Function
0000	#	Enter into programming mode

Note: For first-time use, Master code is 0000

Program – Set Single-user or Multi-user mode

Note: This is used only when all User codes have been reset.

Access	Validation	Function
8900	#	Sets system to single-user mode.
8901	#	Sets system to multi-user mode.

Program – Changing Master and User Codes (1) – Single-user mode

Access	Code entry	Validation	Function
0	4 digits, fixed	#	Personal Master Code and super user code
1	4 digits, fixed	#	User Code for output #1, with duress feature
2	4 digits, fixed	#	User Code for output #2

Program – Changing Master and User Codes (2) – Multi-user mode

Access	User number	Code entry	Validation	Function
0		4 to 8 digits	#	Personal Master Code and super user code
1	00 to 99	4 to 8 digits	#	Up to 100 User Codes for output #1, with duress feature
2	0 to 9	4 to 8 digits	#	Up to 10 User Codes for output #2

Program – Configure Relay Outputs

Access	Relay timer entry	Validation	Function
40	1 to 999	#	Relay 1, momentary mode, from 1 to 999 seconds
41		#	Relay 1, shunt mode (ON/OFF), without Quick Code
42		#	Relay 1, shunt mode (ON/OFF), with Quick Code
50	1 to 999	#	Relay 2, momentary mode, from 1 to 999 seconds
51		#	Relay 2, shunt mode (ON/OFF), without Quick Code
52		#	Relay 2, shunt mode (ON/OFF), with Quick Code

Program – Personal Safety (wrong code entry)

Access	Wrong code entries	Validation	Function
70		#	After 10 successive wrong codes, 30-second lockout
71		#	After 10 successive wrong codes, Duress activated
72	05 to 10	#	After 5 to 10 wrong codes, 15-min. lockout – Can reset with Master Code
76	00	#	None of the above

Program – Exit Programming Mode

Validation	Function
*	Exits programming mode, returns keypad to normal operations

PROGRAMMING THE KEYPAD

To program the SK-983A100, you will first need to decide the following information:

- Whether multiple users will use the same codes (single-user mode) or whether multiple users will have their own individual codes (multi-user mode).
- The master code – Allows the system administrator to program the keypad.
- The user code or codes – Allows users to use the keypad's functions.
- Relay configurations – For each relay, whether its output is momentary from 1 to 999 seconds, or is an on/off operation (shunt mode), or turns on with the 2-digit Quick code and turns off with the full user code.
- Result of improper code entry – Chose between a 30-second code lockout, Duress output, 15-minute code lockout, or none.

Now you can program the keypad as shown below and in fig. 4.

PROGRAMMING NOTES

NOTE – A complete programming guide is shown in fig. 4.

- Master Code – The SK-983A100 comes preprogrammed 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 personal Master Code to replace the factory-set Master Code as soon as possible.
- Programming defaults:
 - Master code — 0000
 - Mode — Single-user mode
 - Output 1 — Momentary mode, 1 second
 - Output 2 — Momentary mode, 1 second
 - Personal safety — After 10 successive wrong codes, 30-second lockout
- Single-user mode vs. multi-user mode:
 - Single-user mode — There is only one four-digit code for all users for each output. It is not necessary to press [#] after inputting the user code. This mode is suitable where a small number of people have access to the keypad.
 - Multi-user mode — Each relay output can have multiple user codes, each of four to eight digits. The [#] must be pressed after inputting the code to activate the keypad. This mode is suitable for situations where multiple users access the keypad in order to easily delete the code of a previous user if he or she is no longer authorized to enter a protected area without teaching the new code to all the other users. Relay output #1 allows up to 100 user codes, while relay output #2 allows up to 10 user codes each. If this is the first time the keypad is used, or if all codes have been reset, you must program "single-user" or "multi-user" mode before inputting codes.
- Multi-user code and DURESS — The DURESS function allows a user under duress (i.e., threatened with harm if he or she does not open the protected door) to input his or her user code by adding "2" to the first digit, which activates the relay while triggering a silent alarm, if so installed. However, because multi-user codes can have four to eight digits, new user codes cannot be the same as previously programmed user codes with "2" added to or subtracted from the first digit. For instance, if the user code "4321" was already programmed, the keypad will not allow a new user code of "2321" or "6321" to be programmed. The keypad uses a "clock" function for assessing codes, meaning that the sequence is "0,1,2,3,4,5,6,7,8,9,0,1,2...", not "...8,9,10,11...". Thus, duress for "9321" is "1321."

SK-983A 100 - User Control Chart

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

USER ID	User Name	Access Code
00	SAMPLE - John Doe	54321
01		
02		
03		
04		
05		
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USER ID	User Name	Access Code
00	SAMPLE - John Do	54321
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Relay Output 2: Output: Shunt / Momentary (____ secs.) Programmed For: _____

0		
1		
2		
3		
4		

5		
6		
7		
8		
9		

Note: copy this sheet to use for your installations.