

Electrified Locks, Relays and Timers

# CM-110SK

## Standalone Keypad

### INSTALLATION INSTRUCTIONS

#### THIS PACKAGE INCLUDES:

- 1 - Keypad
- 1 - Screwdriver 0.8" x 2.4" (20mm x 60mm)
- 2 - Wall plugs 0.24" x 1.2" (6mm x 30mm)
- 4 - Self-tapping Screws 0.16" x 1.1" (4mm x 28mm)
- 1 - Torx screw 0.12" x 0.24" (3mm x 6mm)



#### 1. GENERAL DESCRIPTION

The CM-110SK is a multifunctional standalone keypad with a wiegand output for interfacing to an access control system. It is suitable for mounting in either indoor or outdoor harsh environments. It is housed in a strong, sturdy and vandal proof Zinc Alloy electroplated case. The electronics are fully potted so the unit is waterproof and conforms to IP68. This unit supports up to 2000 users with a 4 digit PIN. The unit has many extra features including lock output current short circuit protection, wiegand output, and a backlit keypad. These features make the unit an ideal choice for commercial and industrial applications such as factories, warehouses, laboratories, banks and prisons.

#### 2. FEATURES

- 2000 users, 4 digit PIN
- Backlit keys
- Zinc Alloy Electroplated anti-vandal case
- Waterproof, conforms to IP68
- Easy to install and program
- Full programming from the keypad
- Can be used as a stand-alone keypad
- Wiegand 26 input for connection to external reader
- Wiegand 26 output for connection to a controller
- Adjustable Door Output time, Alarm time, Door Open time
- Very low power consumption (30mA)
- Fast operating speed, <20ms with 2000 users
- Lock output current short circuit protection
- Built-in light dependent resistor (LDR) for anti-tamper
- Built-in buzzer
- Red, Yellow and Green LEDS display the working status

#### 3. SPECIFICATIONS

Operating Voltage	12VDC $\pm$ 10%
User Capacity	2000
Active Current	< 60mA
Idle Current	25 $\pm$ 5 mA
Lock Output Load	Max 3A
Alarm Output Load	Max 20mA
Operating Temperature	-49°F to 140°F (-45°C to 60°C)
Operating Humidity	10% - 90% RH
Waterproof	Conforms to IP68
Adjustable Door Relay Time	0-99 seconds
Adjustable Alarm Time	0-3 minutes
Wiegand Interface	Wiegand 26 bit
Wiring Connections	Electric Lock, Exit Button, External Alarm, External Reader
Dimensions	5-15/16" H x 1-3/4" W x 1" D (150 mm x 44 mm x 25 mm)

**4. QUICK REFERENCE PROGRAMMING GUIDE**

To enter programming mode	<b>* [Master Code] #</b> 999999 is the default factory master code
To exit from the programming mode	<b>*</b>
<b>Note: You must be in programming mode to program the following feature</b>	
To change the master code	<b>0 [New Code] # [New Code] #</b> The master code can be 6 to 8 digits
To add a PIN user	<b>1 [User ID Number] # [PIN] #</b> The ID number is any number between 1 & 2000. The PIN is any four digits between 0000 & 9999 with the exception of 1234 which is reserved. Users can be added continuously without exiting programming mode.
To delete a PIN user	<b>2 [User ID Number] #</b> for a PIN user or Users can be deleted continuously without exiting programming mode.
To unlock the door for a PIN user	Enter the <b>[PIN]</b> then press <b>#</b>

**5. INSTALLATION**

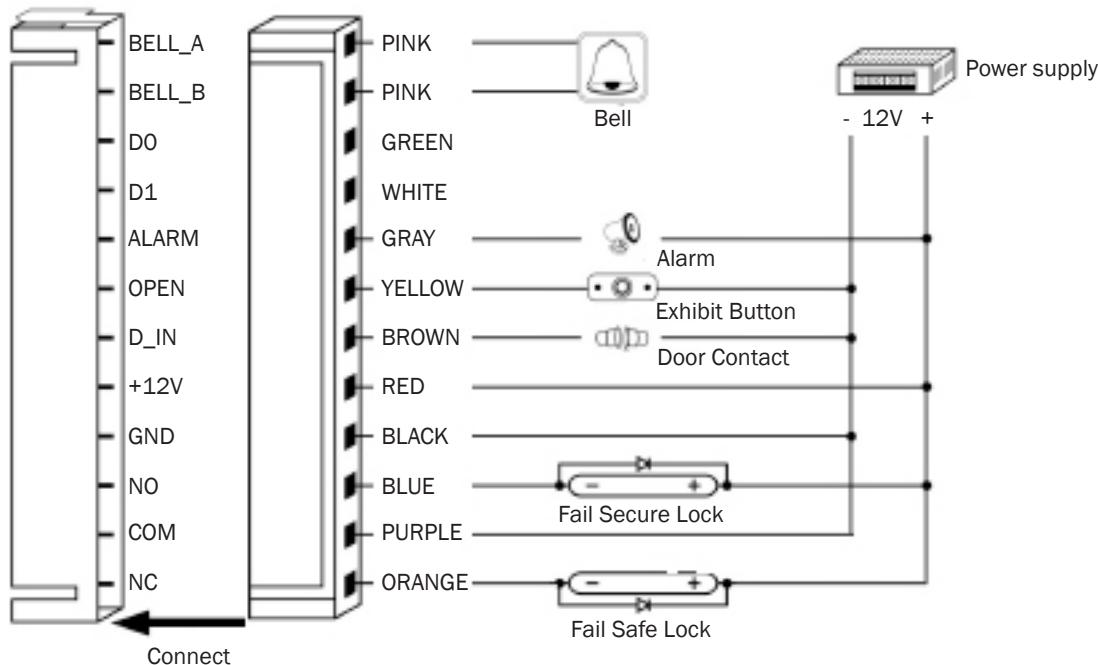
1. Remove the back cover from the keypad using the supplied special screw driver.
2. Drill 2 holes on the wall for the Self tapping screws and 1 hole for the cable.
3. Put the supplied wall plugs into the two holes.
4. Fix the back cover firmly on the wall with the 2 Self tapping screws.
5. Thread the cable through the cable hole.
6. Attach the keypad to the back cover.



## 6. WIRING

COLOR	FUNCTION	DESCRIPTION
Pink	BELL_A	Doorbell
Pink	BELL_B	Doorbell
Green	D0	Wiegand output D0
White	D1	Wiegand output D1
Grey	ALARM	Alarm negative (alarm positive connected 12 V+)
Yellow	OPEN	Exit button (the other end connected GND)
Brown	D_IN	Door Contact switch (the other end connected GND)
Red	12V+	12V + DC Regulated Power Input
Black	GND	12V - DC Regulated Power Input
Blue	NO	Relay Normally Open
Purple	COM	Relay Common
Orange	NC	Relay Normally Closed

Common power supply diagram:



## 7. RESET TO FACTORY DEFAULT

1. Disconnect power from the unit.
2. Press and hold # key while powering the unit back up.
3. On hearing two "Beeps", release # key, system is now back to factory settings.

Note: Only the installer data is restored, user data will not be affected.

## 8. ANTI-TAMPER ALARM

The unit uses a LDR (light dependent resistor) as an anti-tamper alarm. If the keypad is removed from the cover, the tamper alarm will activate.

## 9. SOUND AND LIGHT INDICATION

OPERATION STATUS	RED LIGHT	GREEN LIGHT	YELLOW LIGHT	BUZZER
Power on	-	Bright	-	Beep
Standby	Bright	-	-	-
Press keypad	-	-	-	Beep
Operation successful	-	Bright	-	Beep
Operation failed	-	-	-	Beep/Beep/ Beep
Enter into programming mode	Bright	-	-	-
In the programming mode	-	-	Bright	Beep
Exit from the programming mode	Bright	-	-	Beep
Open the door	-	Bright	-	Beep
Alarm	Bright	-	-	Alarm

## 10. DETAILED PROGRAMMING GUIDE

## 10.1 User Settings

To enter the programming mode	* <b>Master code #</b> 999999 is the default factory master code
To exit from the programming mode	*
<i>Note that to undertake the following programming, the master user must be logged in</i>	
To change the master code	0 <b>New code # New code #</b> The master code can be 6 to 8 digits long
To add a <b>Pin</b> user	1 <b>User ID number # PIN #</b> The ID number is any number between 1 & 2000. The PIN is any four digits between 0000 & 9999 with the exception of 1234 which is reserved. Users can be added continuously without exiting programming mode as follows: 1 User ID no 1 # PIN # User ID no 2 # PIN #
To delete a <b>Pin</b> user	1 <b>User ID number # PIN #</b> Users can be deleted continuously without exiting programming mode
To change the <b>PIN</b> of a PIN user <i>(This step must be done out of programming mode)</i>	* <b>ID number # Old PIN # New PIN #</b> New PIN #
To delete <b>All users</b>	
To delete <b>ALL users</b> . Note that this is a <b>dangerous</b> option so use with care	2 <b>0000 #</b>
<b>To unlock the door</b>	
For a <b>Pin</b> user	Enter the <b>PIN</b> then press <b>#</b>

## 10.2 Door Settings

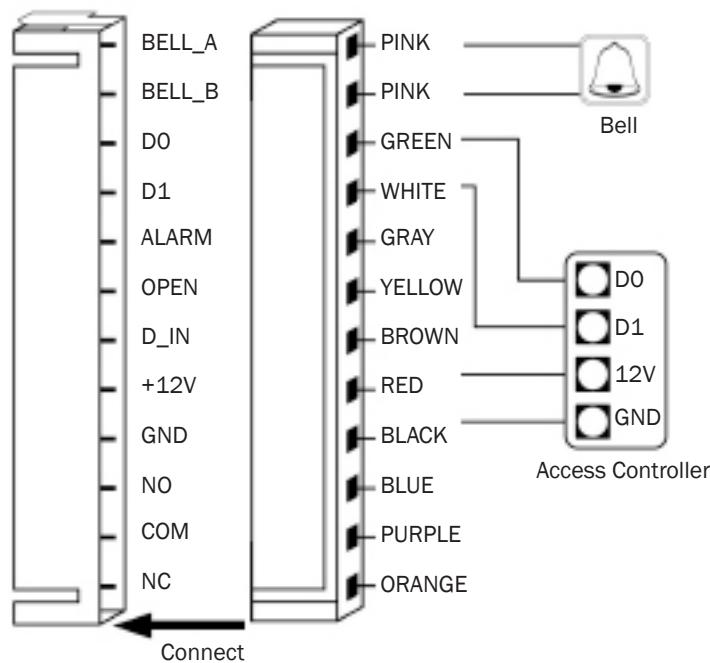
<b>Relay Output Delay Time</b>	
To set door relay strike time	* Master code # 4 0~99 # *
0-99 is to set the door relay time 0-99 seconds	
<b>Door Open Detection</b>	
<p><b>Door Propped Open Alarm.</b> When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened normally, but not closed after 1 minute, the inside buzzer will beep automatically to remind people to close the door and continue for 1 minute before switching off automatically.</p> <p><b>Door Forced Open Alarm.</b> When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened by force, or if the door is opened after 20 seconds of the electro-mechanical lock not being closed properly, the inside buzzer and alarm output will both operate. The Alarm Output time is adjustable between 0~3 minutes with the default being 1 minute.</p>	
To disable door open detection. (Factory default)	6 0 #
To enable door open detection	6 1 #
<b>Alarm output time</b>	
To set the alarm output time (0~3 minutes) Factory default is 1 minute	5 0~3 #
<p><b>Keypad Lockout &amp; Alarm Output options.</b> If there are 10 invalid cards or 10 incorrect PIN numbers in a 10 minute period either the keypad will lockout for 10 minutes, or the alarm will operate for 10 minutes, depending on the option selected below.</p>	
Normal status: No keypad lockout or alarm (factory default)	7 0 # (Factory default setting)
Keypad lockout enable	7 1 #
Alarm and inside buzzer operate	7 2 #
<b>To remove the alarm</b>	
To reset the Door Forced Open Alarm	Master Code #
To reset the Door Propped Open Alarm	Close the door <b>or</b> Master Code #

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### 11. THE UNIT OPERATING AS A WIEGAND OUTPUT READER

In this mode the unit supports a Wiegand 26 bit output so the Wiegand data lines can be connected to any controller which supports a Wiegand 26 bit input.



#### 11.1 Keypad 8 bit Burst Mode

Every key pressed generates an 8 bit data stream that is transmitted over the Wiegand bus.

Key	Output	Key	Output
0	11110000	6	10010110
1	11100001	7	10000111
2	11010010	8	01111000
3	11000011	9	01101001
4	10110100	*	01011010
5	10100101	#	01001011