Camden
DOOR CONTROLS

eXPRESS

1. Packing List

Qty	Name	Remarks
1	Keypad	
1	User manual	
1	Screwdriver	0.8" x 2.4" (20 mm×60 mm)
2	Wall plugs	0.24" x 1.2" (6 mm×30 mm)
2	Self-tapping screws	0.16" x 1.1" (4 mm×28 mm)
1	Torx screw	0.12" x 0.24" (3 mm×6 mm)

$5\frac{15}{16}$" [150mm]

$1\frac{3}{4}$" [44mm]

2. 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.

3. 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

4. Quick Reference Programming Guide

To enter programming mode	[*] [Master Code] [#] 999999 is the default factory master code
To exit from the programming mode	[*]
Note: You must be in programming mode to program the following feature	
To change the master code	[0] [New Code] [#] [New Code] The master code can be 6 to 8 digits
To add a PIN user	[1] [User ID Number] [#] [PIN] 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	[2] [User ID Number] [#] for a PIN user or Users can be deleted continuously without exiting programming mode.
To unlock the door for a PIN user	Enter the [PIN] then press [#]

5. Specifications

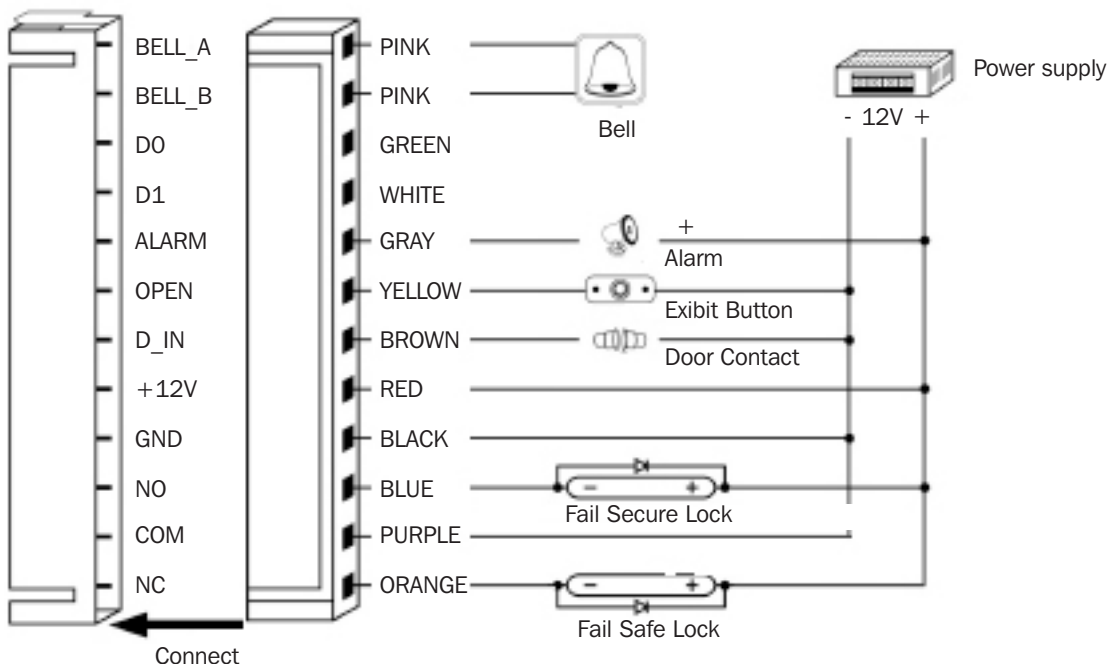|	
Operating Voltage	12V DC ±10%
User Capacity	2,000
Active Current	< 60mA
Idle Current	25±5 mA
Lock Output Load	Max 3A
Alarm Output Load	Max 20 mA
Operating Temperature	-49°F to 140°F (-45°C to 60°C)
Operating Humidity	10% - 90% RH
Waterproof	Conforms to IP 68
Adjustable Door Relay time	0 - 99 seconds
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)

6. Installation

- Remove the back cover from the keypad using the supplied special screw driver

- Drill 2 holes on the wall for the Self tapping screws and 1 hole for the cable

- Put the supplied wall plugs into the two holes

- Fix the back cover firmly on the wall with the 2 Self tapping screws

- Thread the cable through the cable hole

- Attach the keypad to the back cover

7. Wiring

Color	Function	Description
Pink	BELL_A	Doorbell
Pale Blue	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:

8. Reset to Factory Default

a. Disconnect power from the unit

b. Press and hold # key while powering the unit back up

c. 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.**

9. 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 operate.

10. 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

11. Detailed Programming Guide

11.1 User Settings

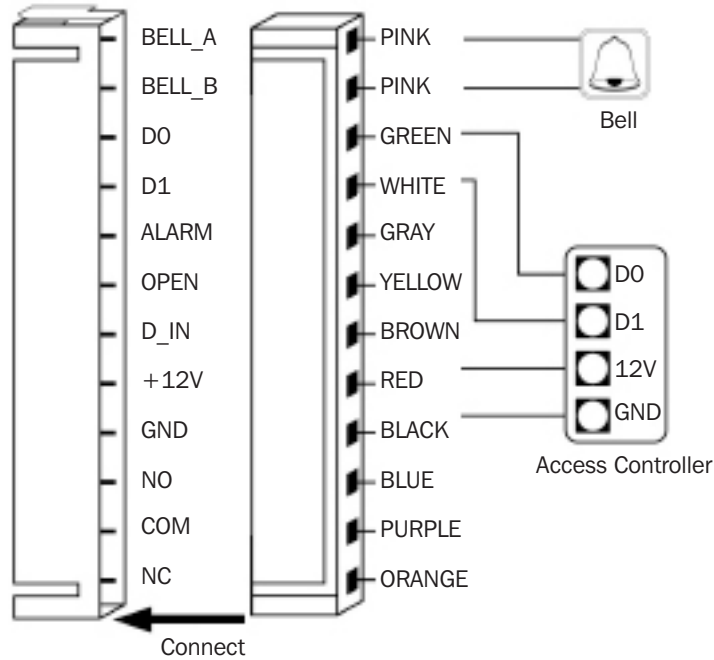|	
To enter the programming mode	* Master code # 999999 is the default factory master code
To exit from the programming mode	*
Note that to undertake the following programming, the master user must be logged in	
To change the master code	0 New code # New code # The master code can be 6 to 8 digits long
To add a **Pin** user	1 User ID number # PIN # 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 **PIN** user	2 User ID number # Users can be deleted continuously without exiting programming mode
To change the **PIN** of a PIN user *(This step must be done out of programming mode)*	* ID number # Old PIN # New PIN # New PIN #

To delete **All users**	
To delete **ALL users.** Note that this is a **dangerous** option so use with care	2 0000 #

To unlock the door	
For a **PIN** user	Enter the PIN then press #

11.2 Door Settings

Relay Output Delay Time	
To set door relay strike time	* Master code # 4 0~99 # * 0-99 is to set the door relay time 0-99 seconds

Door Open Detection

Door Propped Open Alarm. 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.

Door Forced Open Alarm. 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.

To disable door open detection. (Factory default)	6 0 #
To enable door open detection	6 1 #

Alarm output time	
To set the alarm output time (0~3 minutes) Factory default is 1 minute	5 0~3 #

Keypad Lockout & Alarm Output options. 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.

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 #

To remove the alarm	
To reset the Door Forced Open Alarm	Master Code #
To reset the Door Propped Open Alarm	Close the door **or** Master Code #

12. 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.

BELL_A	PINK
BELL_B	PINK
D0	GREEN
D1	WHITE
ALARM	GRAY
OPEN	YELLOW
D_IN	BROWN
+12V	RED
GND	BLACK
NO	BLUE
COM	PURPLE
NC	ORANGE

Bell

Access Controller
- D0
- D1
- 12V
- GND

Connect

12.1 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

Push Buttons   Keypads   Strikes   Magnetic Locks   Key Switches   Relays & Timers   Access Control