

# **CRYPTO-LOCK**

## **Model CC-8521A**

### **Access Control System**

### **Instruction Manual**

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**Moniteq, Inc.**



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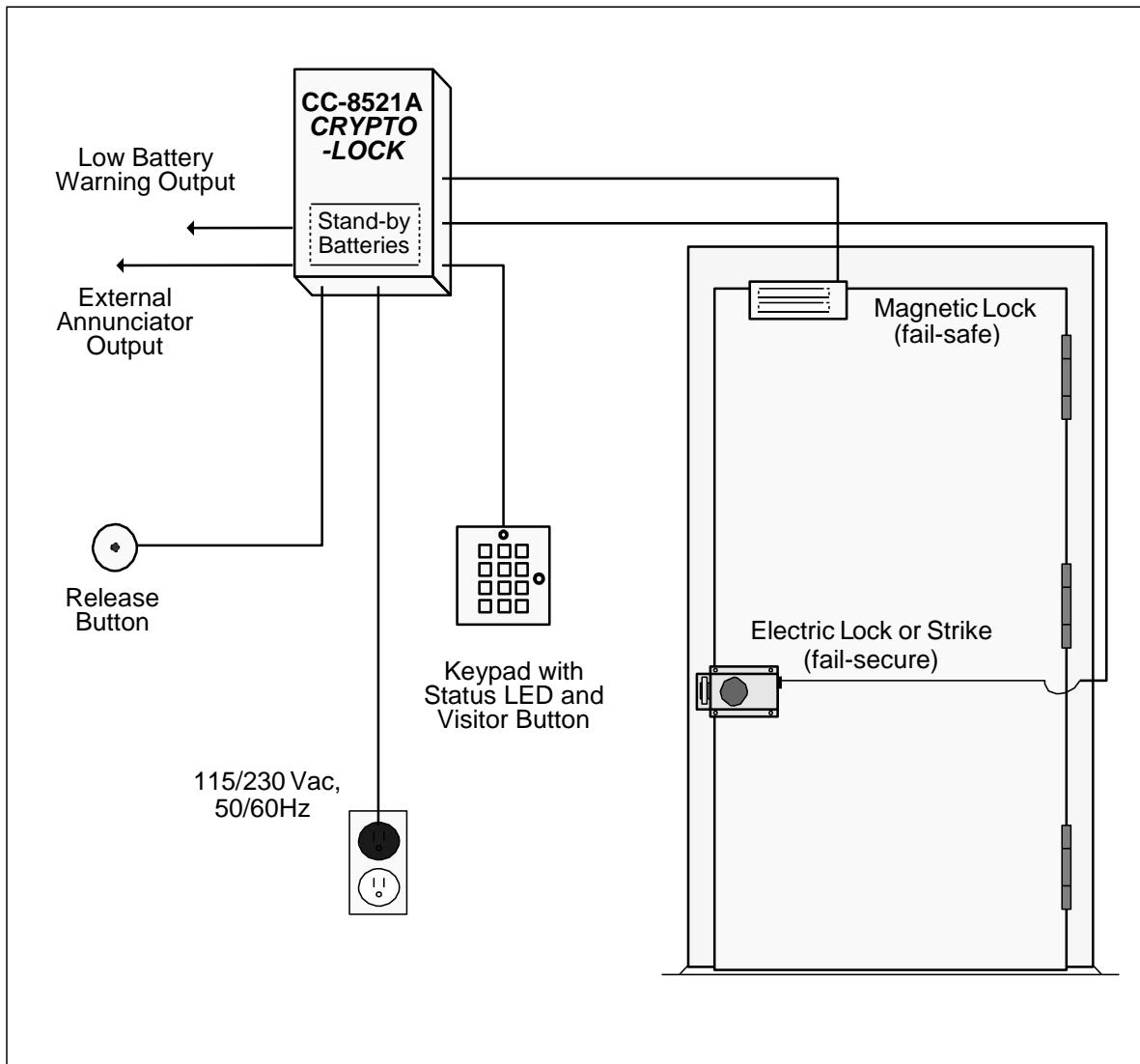
# Introduction

The Crypto-Lock Model CC-8521A is a single door access control system providing keypad control using a single 3-5 digit PIN code. Typical installation is illustrated in Figure 1.

The system includes a built-in 12VDC and 24VDC, 4A power supply to power electric strikes and magnetic locks, eliminating the need for a separate power unit. It provides the high in-rush currents required to reliably open heavy-duty locking devices such as Von Duprin\* rim latch retraction units and Sargent & Greenleaf Brute\* electric locks. The control unit contains the logic board, power supply board and power transformer. It can also house two optional 12V, 7AH sealed lead acid batteries (not included) and maintain them at full charge. Audible and visual warnings will occur when the charge level is low.

The weatherproof, 10-button, stainless steel, spy-proof keypad unit includes a green LED which illuminates when the lock is released. A visitor button on the keypad activates an annunciator in the control unit and generates output signal for an optional external audio or visual device (not included).

*\*Von Duprin is a registered trademark of the Ingersoll-Rand Company; Brute is a registered trademark of Sargent & Greenleaf, Inc.*



**Figure 1, Typical Installation**

# Specifications

<b>Power Required</b>	115 or 230VAC, 50 or 60Hz, 60W
<b>Output</b>	12VDC, 0.8A or 25 VDC, 4A continuous
<b>Holding Current</b>	Can be limited to 300mA (switch selectable)
<b>In-rush Current Capacity</b>	16A
<b>Relay Contacts</b>	10A, SPDT (Form C)
<b>Battery Backup</b>	12VDC or 24VDC, automatic transfer and charging (batteries optional)
<b>Enclosure Description</b>	19 gauge steel, powder coated paint, gray color, knockouts for conduit and cam lock (included), holes to accommodate padlock (not included)
<b>Enclosure Dimensions</b>	12H x 9W x 4.5D in.
<b>Optional Equipment Available</b>	CC-BATT (2 required), CC-BRUTE

## Supplied Equipment

QTY	ITEM	PURPOSE
1	Control Unit	Main Processor and Power Supply
1	Keypad with 15' Cable	Accepts PIN Code Entries
1	Manual, Crypto-Lock CC-8521A	Installation and Operating Instructions
1	Keypad Mounting Template	Keypad Installation
1	Line Cord with U.S. 3-prong plug, 10 ft.	Connection to AC Power
2	Threaded Rod, #8 x 12"	Keypad Mounting, Thru-wall
1*	Cam lock w/ Two Keys	Lock Control Unit Door
2*	Screw, Slotted, Sheet Metal, #6, ½"	Hold Control Unit Door Closed
2*	Battery Cables, #18 AWG, Black/Red	Connect Batteries to Power Supply Board
2*	Fuse, 5 x 20MM, 4A, Slo-Blo	Spares
4*	Hex Nut, #8	Keypad Mounting
2*	Acorn Nut, #8	Keypad Mounting, Thru-wall
6*	Lock Washer, #8	Keypad Mounting
2*	Washer, #8, 1 ¼" dia.	Keypad Mounting, Thru-wall
8*	Pan head Combo Drive Screw, #8 x 1 ½"	Keypad and Control Unit Mounting
2*	Bushing, Black Nylon, 7/8"	Protects Cable Entering Control Unit
2*	Vent Plug, Black Nylon, 7/8"	Control Unit Ventilation
2*	Anchor, Nylon, Adhesive Back, 1" x 1"	Secure Cables within Control Unit
6*	Tie Wrap, Nylon, 4"	Secure Cables within Control Unit

\*Items packed in poly bag

# Functions of Controls and Indicators

## **Keypad**

Keys 1 through 0: enter PIN code

Keys \* and #: not used

*Green LED:* illuminates when correct PIN code has been entered and door is released

*Annunciator Button:* sounds annunciator in control unit and activates 12VDC signal for an external device (not included)

## **Logic Board**

*PIN Code Digit Select Switches:* set the PIN code; one number on each switch is selected corresponding to the digit 1 through 5 of the PIN code; slide the corresponding switch to the ON position to select a number; slide switches for unused digits should be left in the OFF position if the PIN code is less than 5 digits

*Duration Control:* sets how long the door relay will remain energized after the correct PIN code is entered or the release button is pressed (adjustable from 3 to 60 seconds)

*Penalty Control:* temporarily disables the system when an invalid digit is entered (adjustable from 3 to 60 seconds)

*Penalty LED:* illuminates when the penalty feature is activated

*# of Digits Switch:* selects either 3, 4, or 5 digits for the length of the PIN code

*Power LED:* indicates that the Logic Board is powered

## **Power Supply Board**

*Output Voltage Source (INT 24V, EXT, or INT 12V):* selects the voltage that will operate the locking device attached to the system; **ALWAYS REMOVE POWER (AC AND BATTERIES) BEFORE RESETTING THIS SWITCH**

24V or 12V positions: the internal power supply provides either 24 or 12VDC, respectively, to the locking device

EXT position: the external voltage applied to pin 12 of T1 on the Power Supply Board is applied through the relay to the locking device

### *Output Mode (DIRECT or LIMIT):*

DIRECT position: provides up to 4A of continuous holding current

LIMIT position: the holding current is limited to approximately 300mA after the locking device is initially energized; this setting permits holding an electric lock or strikes open without damaging its solenoid; current limiting operated only when the Output Voltage Source Switch is set to INT 24V

*AC Power LED:* indicates that the Power Supply Board is powered

*Low Battery LED:* flashes approximately every 15 seconds when the battery is low

*B1 Alarm:* sounds approximately every 15 seconds when the battery is low

*F1 and F2:* AC low voltage, 4A Slo-Blo

*F3:* batteries, 4A Slo-Blo

*F4:* 12VDC, 4A Slo-Blo

*F5:* AC primary voltage, 4A Slo-Blo

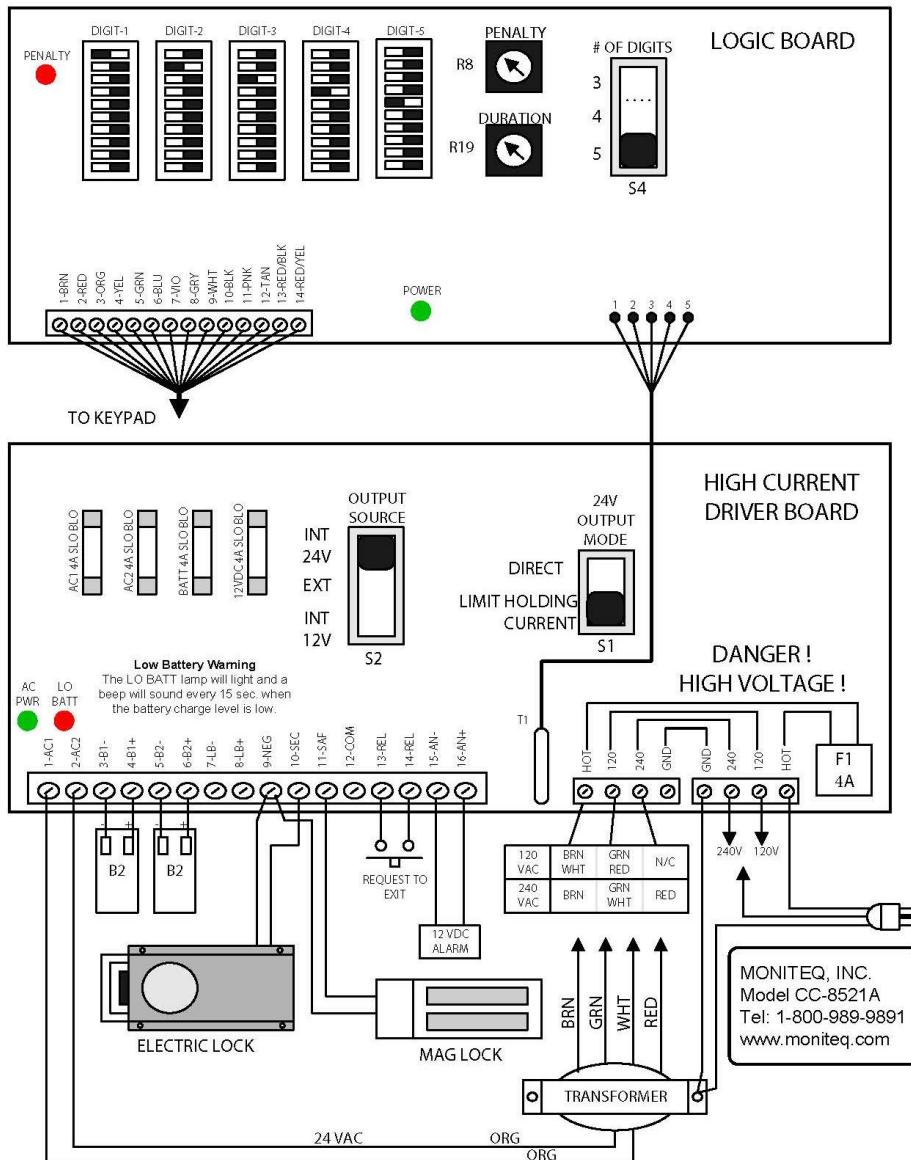
# Installation

**WARNING: DO NOT CONNECT AC POWER CORD TO POWER SOURCE UNTIL ALL SET UP IS COMPLETE!!!** Consult Figure 2 for installation.

- 1) Mount the keypad approximately 36 to 44 inches above the floor on the unsecured side of the door. Use the keypad installation template to mark and drill holes. Through-wall mounting can be accomplished using the #8 threaded rod, acorn nuts, hex nuts, lock washers and 1 ½" washers. Alternatively, the keypad can be mounted using four of the supplied #8 x 1 ½" pan head combo drive screws.
- 2) Mount the electric lock, strike or magnet according to manufacturer instructions.
- 3) Mount the control unit on the secure side of the door in an area convenient to the door and electrical outlet. Four #8 x 1 ½" pan head combo drive screws are provided.
- 4) If required, install the supplied cam lock in the knockout hole provided for that purpose (on the enclosure door). Alternatively, if a padlock (not included) is to be used, remove the two 3/8" nylon plugs from the padlock holes. The padlock's shackle must be first inserted through the hole on the side of the enclosure; the door can then be closed so that the padlock hole on the door also passes over the shackle. If the door does not need to be locked, the two supplied #6 x ½" screws can be used in the holes on the door edge to hold it closed. Note: all cables passing through the knockout holes in the enclosure must be protected from chafing using the supplied 7/8" nylon grommets. Route all cables to avoid the space in the bottom of the control unit that can be occupied by batteries. Nylon tie wraps and self-adhesive nylon anchors are supplied for this purpose.
- 5) Connect the keypad to the control unit by color. Fifteen feet of cable is supplied with the keypad. The keypad can be located up to 200 feet from the control unit using additional cable (14 conductors, #22 required).
- 6) Connect the electric lock, strike or magnet.
- 7) If used, connect the release button (not included) and external 12VDC annunciator (not included, 2 conductors, #22 required). Note that an internal annunciator on the Logic Board will sound when the keypad's annunciator button is pressed.
- 8) Install and connect the optional batteries using the two supplied battery cables. Use only 12V, 1.2 to 7AH rechargeable sealed lead acid batteries (Part # CC-BATT).
- 9) Connect the AC power cord to T4 according to the available voltage (115/230VAC).
- 10) Connect the transformer wires to T3 according to the available voltage (115/230VAC). CAUTION: The control unit is factory wired for 115VAC operation.

# **Setup**

- 1) Set the Output Source switch (S2) to 12 or 24VDC as dictated by the voltage rating of the lock being used.
- 2) Set the Output Mode switch to LIMIT when used with Brute electric lock or a similar heavy-duty solenoid operated lock. Set this switch to DIRECT when used with standard electric strikes or magnetic locks.
- 3) Set the # of Digits switch (S4) to the desired number of PIN digits (3, 4 or 5).
- 4) Set the valid PIN code using the Digit DIP switches. DIP switches for unused digits should all be set to OFF.
- 5) Set the Duration control (R19) to the approximate desired open time (minimum of 3 seconds, maximum of 60 seconds) by adjusting the potentiometer.
- 6) Set the Penalty control (R8) to the approximate desired penalty time (minimum of 3 seconds, maximum of 60 seconds) by adjusting the potentiometer.
- 7) Connect the power cord to an appropriate source of AC power and verify that the Power LED illuminates.
- 8) Enter the valid PIN code on the keypad and verify that the lock releases and that the green LED on the keypad illuminates.



#### Operator's Quick Guide

1. Set the valid PIN number by first setting the NUMBER OF DIGITS switch (3, 4 or 5 digits), then setting the valid PIN using the slide switches. Set only one number for each digit position.
2. Use the DURATION control to set the amount of time (3 to 60 sec.) that the lock remains released.
3. Use the PENALTY control to set the amount of time (3 to 60 sec.) that keypad entries will be ignored after entry of an invalid digit.
4. **Caution:** Consult the Instruction Manual before attempting any other adjustments. (Instruction Manual is available at [www.moniteq.com](http://www.moniteq.com))

**Figure 2, Wiring Diagram**

# **Operating Procedure**

To operate the CC-8521A, enter the valid 3-5 digit PIN code on the keypad. When the valid PIN code is entered, the green LED on the keypad will illuminate and the door lock will release.

The keypad has a build-in visitor annunciator button. Pressing this button causes an annunciator to sound in the control unit. If an external audio or visual device is connected, it will also activate when this button is pressed.

If one or more incorrect PIN code digits are entered, the system will enter a penalty mode and will not recognize any digits for the programmed 3-60 seconds. After the penalty time has elapsed, the unit will return to normal operation and entering the valid PIN code on the keypad will release the door.

If the external release button has been installed, it can be used by an attendant to release the lock from a location on the secure side of the door.

## **Limited Warranty**

Moniteq, Inc. products are warranted to be free from factory defects for a period of one year from the date of shipment. The repair or replacement of a defective part shall be at the option of the factory when the product is shipped, prepaid and insured, by the owner. This warranty is void in cases of abuse, misuse, mishandling, modification, or repair by unauthorized persons. This warranty is given in lieu of all other warranties expressed or implied. Moniteq, Inc. is not liable for incidental or consequential damages resulting from the operation or failure of this product. This warranty recognizes any and all rights you may have under appropriate state law.

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