

CRYPTO-LOCK

Model CC-8521B

Access Control System

Instruction Manual

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Moniteq, Inc.

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Introduction

The Crypto-Lock Model CC-8521B is a single door access control system providing keypad control using a single 3-6 digit PIN code. It can be used with most magnetic and electric strikes, including doors with both features. Typical installation is illustrated in Figure 1. A wiring diagram is affixed to the interior of the control unit door and in figure 2 of this manual.

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 adequate power to reliably open heavy-duty locking devices such as Von Duprin* rim latch retraction units and Sargent & Greenleaf Brute* electric locks. The control unit can 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.

Security features include anti-follow, propped and forced door alarms, invalid PIN penalty delays and adjustable time durations of lock release after entry of a valid PIN code. A release button (not provided) can be used to remotely unlock the door from a location on the secure side of the door.

The weatherproof, 10-button, stainless steel, spy-proof keypad unit includes a green LED which illuminates when the lock is released. A # 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.*

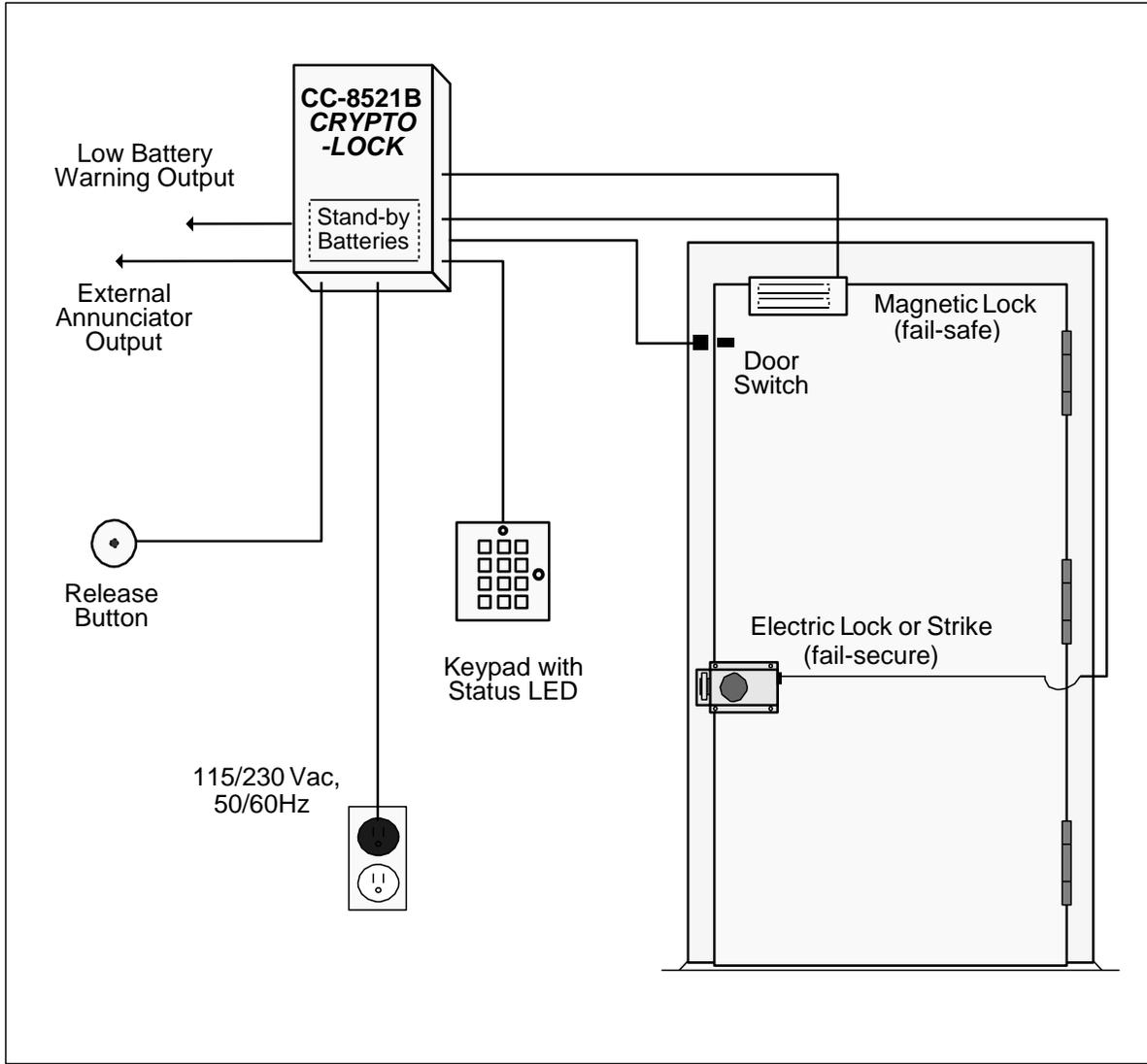


Figure 1, Typical Installation

Specifications

Power Required	115 or 230VAC, 50 or 60Hz, 25W
Output	12VDC or 25 VDC, 4A continuous
In-rush Current Capacity	16A
Relay Contacts	10A, SPDT (Form C)
Battery Backup	12VDC or 24VDC, automatic transfer and charging (batteries optional)
Enclosure Description	19 gauge steel, powder coated paint, gray color, knockouts for conduit and cam lock (included), holes to accommodate padlock (not included)
Enclosure Dimensions	12H x 9W x 4.5D in.
Optional Equipment Available	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-8521B	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, 1/2"	Hold Control Unit Door Closed
2*	Battery Cables, #18 AWG, Black/Red	Connect Batteries to 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 1/4" dia.	Keypad Mounting, Thru-wall
8*	Pan head Combo Drive Screw, #8 x 1 1/2"	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

Normal Operation Mode

Keys 1 through 0: enter PIN code

Key: sound annunciator in Control Unit and activate 12VDC output signal for use with external device (not included)

** Key:* not used

Green LED: illuminates when correct PIN code has been entered and door is released; flashes when any key is pressed

PROGRAMMING MODE

Keys 1 through 0: enter programming codes

Key: terminate the programming mode

** Key:* delimiter for programming codes and parameters

Green LED: flashes continuously, single flash for valid programming entry, three flashes for invalid programming entry

CONTROL UNIT

Penalty LED: illuminates when invalid PIN penalty feature is activated

AC Power LED: illuminates when the system is AC powered

Battery Power LED: illuminates when the system is battery powered

Output Voltage Switch (24 or 12V): selects voltage to operate attached locking devices

Output Mode Switch (direct or limit holding current): direct provides up to 4A of continuous holding current, limit holds current to approximately 300 mA after locking device energizes (limit setting permits holding an electric lock or strike open without damaging its solenoid, will only operate when output voltage switch is set to 24V)

Low Battery LED: illuminates when the battery is low

Alarms: varies, see Alarm Sequences, page 12

F6: 12VAC power

F4: 24VDC power

F5: Lock

F3: Batt

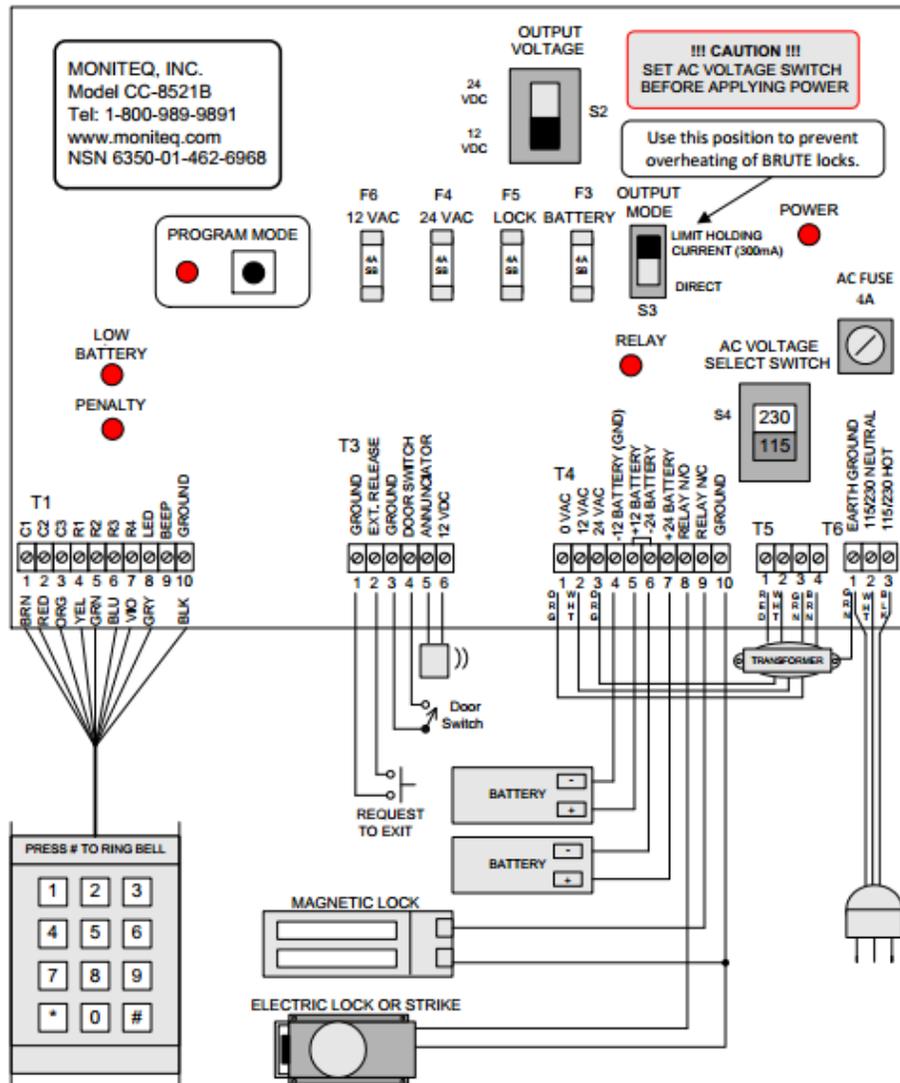
Installation

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. Securing components 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 1,000 feet from the control unit using additional cable (10 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) If using the propped or forced door alarms, connect a door switch (not included).
- 9) 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).
- 10) Connect the AC power cord to T4 according to the available voltage (115/230VAC).
- 11) 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. If both lock types are being used, they must have the same voltage rating.
- 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) Connect the power cord to an appropriate source of AC power and verify that the Power LED illuminates.
- 4) Enter the valid PIN code on the keypad and verify that the lock releases and that the green LED on the keypad illuminates.



PROGRAMMING QUICK GUIDE

Function	Sequence	Range of N	Default
PIN MANAGEMENT FUNCTIONS			
Set Defaults	*00*	N/A	N/A
Delete PIN	*10*	N/A	N/A
Set PIN	*11*N*	3-6 digits	No valid PIN
Penalty Time	*12*N*	5 to 60 (sec.)	5 sec.
Invalid PIN Alarm	*13*N*	0=Off, 1=On	Off
DOOR MANAGEMENT FUNCTIONS			
Open Duration	*20*N*	1 to 60 (sec.)	5 sec.
Anti-Follow	*21*N*	0=Off, 1=On	Off
Door Propped Alarm	*22*N*	1 to 255(sec.)=On,	Off
Delay Time		0=Propped Alarm Off	
Door Propped Alarm	*23*N*	15 to 255(sec.),	Door Closed
Duration		0=Door Closed	
Forced Door Alarm	*24*N*	0=Off, 1=On	Off

Figure 2, Wiring Diagram

Programming

Function	Sequence	Range of N	Default
PIN Management Functions			
Set Defaults	*00*	N/A	N/A
Delete PIN	*10*	N/A	N/A
Set PIN	*11*N*	000 to 999, 9999, 99999 or 999999	No valid PIN
Penalty Time	*12*N*	5 to 60 (seconds)	5 seconds
Invalid PIN Alarm	*13*N*	0=off, 1=on	Off
Door Management Functions			
Open Duration	*20*N*	1 to 60 (seconds)	5 seconds
Anti-Follow	*21*N*	0=off, 1=on	Off
Door Propped Alarm Delay	*22*N*	0=off, 1 to 255 (seconds)=on	Off
Door Propped Alarm Duration	*23*N*	0=door closed, 15 to 255 (seconds)	Door closed
Forced Door Alarm	*24*N*	0=off, 1=on	Off

Enter the programming mode by pressing the PROGRAM MODE button inside the control unit. The red program LED in the control unit and the green LED on the keypad will both flash to verify that the programming mode is active. To exit programming, press the PROGRAM MODE button again or the # key on the keypad. Alternatively, the system will revert to normal mode if no keys are pressed for 5 minutes.

Initial Settings: During a new installation or if existing settings are unknown, it is recommended that the default values for all PIN and door monitoring settings be reset by entering *00* on the keypad.

PIN Management: A new valid PIN code can only be set when the system is in the programming mode. To establish a new valid PIN, enter *11*N*, where N is any number containing 3-6 digits. To delete the current valid PIN, enter *10* to effectively disable the keypad since no PIN entry can be used to release the door.

Penalty Delays: An invalid PIN penalty feature protects against an unauthorized user gaining entry by entering successive guesses of the correct PIN. When an invalid PIN is entered, the system then ignores all further PIN entries for 5 to 60 seconds. The default value is 5 seconds. To change the penalty time, enter *12*N*, where N is from 5 to 60. After five successive invalid PIN entries, the penalty time is automatically reset to 60 seconds until the valid PIN is entered. This feature increases the average time it would take to successfully guess the valid PIN and is particularly effective in protecting

PINs with only 3 or 4 digits. An invalid PIN alarm feature sounds an alarm (three short beeps) whenever an invalid PIN is entered. This feature is disabled by default. To enable, enter *13*1*. To disable, enter *13*0*.

Door Monitoring: The system includes a number of functions that make it possible to monitor the status of the door during operation. With the exception of the open duration function, these features require that a door position switch (not included) be installed on the door and connected to the control unit.

Open Duration: The open duration is the time period during which the door is released (unlocked) after either a valid PIN is entered on the keypad or the remote release button is pressed. The default open duration time is 5 seconds. To change the open duration time, enter *20*N*, where N is from 1 to 60.

Anti-Follow: The anti-follow mode is provided to prevent the door from being re-opened a second time during the open duration time period. This function is disabled by default. To enable anti-follow, enter *21*1*. To disable anti-follow, enter *21*0*. When this function is enabled, the door re-locks immediately after it closes, regardless of the open duration setting.

Door Propped Alarm: The door propped alarm function sounds an alarm when the door remains open for more than a specified time or until the door is closed. This function is disabled by default. To enable the door propped alarm, set the door propped alarm delay time by entering *22*N*, where N is 1 to 255. To disable the door propped alarm, enter *22*0*.

Door Propped Alarm Duration: The door propped alarm duration can be set to sound continuously either until the door closes or until a time out period expires. Enter programming code *23*0* to set the door propped alarm to sound until the door closes. To have the door propped alarm sound until a time out period expired or the door closes (whichever occurs first), enter *23*N*, where N is 15 to 255.

Forced Door Alarm: The forced door alarm function sounds an alarm if the door is opened without being released by the system. This function is disabled by default. To enable the forced door alarm, enter *24*1*. To disable the forced door alarm, enter *24*0*. The forced door alarm is silenced by entering the valid PIN on the keypad or by disabling the forced door alarm function by entering programming code *24*0*.

Operating Procedure

To operate the CC-8521B, enter the valid 3-6 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 the # 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 an incorrect PIN code is entered, the system will enter a penalty mode and will not recognize any digits for the programmed 5-60 seconds. If five successive invalid PINs are entered, the penalty time is set to 60 seconds until the valid PIN is entered. 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.

Various alarm situations activate different sequences of sounds on the alarm in the control unit. If an external audio device is connected to the system, it will sound the same sequences as the alarm in the control unit. The table below lists these alarm sequences and their meaning.

Alarm Type	Alarm Sequence		Silenced By
Visitor	Activated by # button on keypad		
Invalid PIN	- - - - -	Five short beeps	After five short beeps
Door Propped	_____	Continuous long beeps	Door closed or time out set by code *23*N*
Forced Door	- - - - - - - - - - -	Continuous short beeps	Valid PIN or code *24*0*
Low Battery	- - - - -	Chirp every 15 seconds	Apply AC power

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.

Moniteq, Inc.

213 Church Street
Greensboro, MD 21639

Tel: 1-410-827-8870
1-800-989-9891
Fax: 1-410-827-8875
info@moniteq.com
www.moniteq.com