
Electronic Locking System User's Manual



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1. Overview` 2
 1.1 Intended use..... 3
 1.2 Safety 3
 1.3 Guarantee..... 3
 1.4 Symbols used in this manual 3
 1.5 Technical data..... 4
2. Testing the factory-set programming..... 5
 2.1 Master code 5
 2.2 User codes 5
3. Changing the master code (programming mode)..... 6
4. Changing the user codes (programming mode) 7
5. Opening the doors (user mode)..... 9
Notes 10
APPENDIX A-Sheet 1 of 4 11
APPENDIX A-Sheet 2 of 4 12
APPENDIX A-Sheet 3 of 4 13
APPENDIX A-Sheet 4 of 4 14
APPENDIX B-Sheet 1 of 2..... 15
APPENDIX B-Sheet 2 of 2..... 16
APPENDIX C-Electronic locking system quick card 17

1. OVERVIEW

The CPI Standalone Electronic Locking System controls two swing handles, typically the front and rear doors of a cabinet. The system consists of a Keypad Module, a Power Module, a rear door lock, wiring, and fasteners.

The system stores up to five user codes for the front door and five user codes for the rear door. Code numbers are programmed at the keypad and first require authorization of a special master code number. **Carefully protect the current master code, as it controls all code input and changes.** See Page 9 for an example of information to be securely guarded.

- The **Keypad Module**, the processing unit of the electronic locking system, includes a numerical keypad, the data memory, and the controller unit for the storage and evaluation of the input. Two LEDs light or flash in a defined sequence to indicate the system's status.
- The **Power Module** provides the necessary electrical energy for operating the handle locks.
- The electronic latch must be powered with 110VAC to operate. On receipt of the cabinet, use the keys attached to the front door to remove one of the side panels and allow access to the power cord.
- To define user codes, you must first enter the master code (either the factory-set master code or one that you defined). The master code consists of exactly six of the numbers **0** to **9** in any combination.
NOTE: The master code does not unlock the latches. Rather, it allows the entry of user codes that will unlock the latches.
- Press **E** after inputting a code.
- Press **C** to interrupt the input process.
- Errors are indicated by an alternate flashing of both LEDs for 8 seconds. Wait for the LEDs to stop flashing before attempting to input code. After each invalid try, the waiting time increases incrementally to a maximum of about 17 minutes. After input of a valid code, the waiting time is reduced to the original time of 8 seconds.
- Code input must be made within 20 seconds. Exceeding this time causes an automatic interruption with return to the condition "ready for operation" (both LEDs off).
- Each of the 10 user codes is assigned to a number (**1** to **10**). The user codes number **1** to **5** release the opening of the first door (typically the front door). The user codes number **6** to **10** release the opening of the second door (typically the rear door).

- Different user codes can be assigned the same numbers. If the same numbers have been assigned for the user code of the first door (number **1** to **5**) and for the user code of the second door (number **6** to **10**), both doors can be opened at the same time by input of the user code preceded by **0**.
Example: User code 1: 1234; User code 6: 1234. User enters **0** (to open both doors), then code **1234**. Both doors open.

1.1 INTENDED USE

- The electronic locking system is meant for use only as access control of the TeraFrame cabinet.
- Only qualified technicians should install, change, and repair the electronic locking system.
- The instructions for storage, assembly, and operation in this manual must be observed.
- Proper environmental conditions (electrical installations, temperature, air humidity, pollution) must be maintained.
- Changing a user code to “**0000**” invalidates the existing code.

1.2 SAFETY

- Do not operate in an environment with inflammable gas or vapor.
- Avoid direct contact with liquids.

1.3 GUARANTEE

- Under conditions of proper use, the electronic locking system is guaranteed for all mechanical and electrical components for six months from the day of delivery.
- If a defect is found within this six month period, the device sent in will be repaired at the plant – free of charge – or will be replaced. Further claims for damages, particularly for resultant damages, are excluded.
- In case of an inappropriate application, connection, or change, the right to claim under guarantee expires.

1.4 SYMBOLS USED IN THIS MANUAL

The following symbols are used in this operator's manual:

Symbol	Meaning
● ●	Both LEDs on
⊗ ⊗	Both LEDs off

Symbol	Meaning
☼ ☼	Both LEDs flash in unison
☼ ○	Both LEDs flash alternately
● ⊗	Left LED on, right LED off
⊗ ●	Left LED off, right LED on
☼ ⊗	Left LED flashing, right LED off
⊗ ☼	Right LED flashing, left LED off

NOTE: Important notes appear in this format.

1.5 TECHNICAL DATA

Operative range of temperatures		5° to 50° C
Keypad module	Dimensions	64mm x 113mm x 11.3mm
	Voltage supply	12 V +/- 5% DC, stabilized; 0.5 A
	Input	Foil keypad with 12 entry codes
	Optical display	2 LEDs
	Output	2 transistor outputs, open collector, 12 V, max. 0.5 A, protecting diode
Power module	Dimensions	65mm x 45mm x 23mm
	Voltage supply	12 V +/- 5% DC, stabilized; 0.5 A
	Output	2 transistor outputs, open collector, 30 V; max. 6 A (pulse); protecting diode

2. TESTING THE FACTORY-SET PROGRAMMING

After completing the electronic lock wiring, plug the power supply into 110VAC.

- ● After the circuit is connected, the keypad module initiates an automatic check. Both LEDs light for 4 seconds.
- ☼ ○ If an error occurs during the automatic check, both LEDs flash alternately.
- ⊗ ⊗ If no error is detected, both LEDs are turned off. The keypad module is ready for operation.

2.1 MASTER CODE

The master code is factory-set to 6 zeroes: **000000**. You must use this factory-set master code initially in order to change the master code to one of your own choosing. CPI highly recommends changing the master code after installation.

	ACTION	RESULT
1	Press C and E at the same time.	Both LEDs flash. ☼ ☼
2	Enter the master code 000000 and press E .	Both LEDs light up for about 20 seconds before going out ● ●, or you can press C to turn out the lights and proceed with the test

2.2 USER CODES

Two user codes are factory-set to **11111** (front door, designated by initial digit 1 to 5) and **61111** (rear door, designated by initial digit 6 to 0).

Choose which door(s) to open: **1** to open the first door; **2** to open the second door, or **0** to open both doors. **NOTE:** The user is concerned only with which door to open: **1**, **2**, or **0**, and the 4- to 6-digit code supplied by the programmer.

1	To test the front door, enter 11111 and press E .	The left LED lights ● ⊗ as the system searches the front door code banks 1 to 5 for a match. When a match is found, the front door latch opens.
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3	To test the rear door, enter 21111 and press E .	The right LED lights ⊗ ● as the system searches the rear door code banks 6 to 0 for a match. When a match is found, the rear door latch opens.
4	To test both doors, enter 01111 and press E .	Both LEDs light ● ● as the system searches both code banks for a match. When a match is found, both door latches open. About 10 seconds elapse between the release of the first door and the second door.
5	If the LEDs flash alternately, an error has been detected. Wait until the flashing stops and try again.	⚙ ○ The wait time increases incrementally up to 17 minutes. The more erroneous tries, the longer the wait between tries.

3. CHANGING THE MASTER CODE (PROGRAMMING MODE)

To change the master code or user code, the keypad module must be ready for operation (both LEDs are off).

	ACTION	RESULT
1	Press C and E at the same time.	Both LEDs flash. ⚙ ⚙
NOTE: Code input must be done within about 20 seconds. If this time is exceeded, the keypad module returns to the condition "ready for operation" (both LEDs off).		
2	Input the <u>existing</u> 6-digit master code and press E .	The controller unit compares the input with the stored master code. If they conform, both LEDs light ● ●. The master code or user codes can now be changed.
3	Press E and input the <u>new</u> 6-digit master code. Press E again.	

	ACTION	RESULT
4	To confirm the entry, repeat the input of the 6 digits, and press E .	The controller unit compares the two entries of the new master code. If they conform, the new master code is stored in the system, and both LEDs light ● ●.
5	Press C to turn off the LEDs and prepare the keypad module for operation again.	You can now continue to change other codes (reset the master code or user codes).

4. CHANGING THE USER CODES (PROGRAMMING MODE)

	ACTION	RESULT
1	Press C and E at the same time.	Both LEDs flash in unison. ☼ ☼
2	Enter the existing master code and press E .	Both LEDs light. ● ●
3	Decide which user code (1 to 10) to define, change, or invalidate (user code 10 is saved under key 0).	
4	Input the new sequence of numbers, consisting of the user code plus at least 4 and not more than 6 digits (for example, <u>2</u> 1234), and press E to complete the input.	<p>If user code 1, 2, 3, 4, or 5 is entered, the left LED flashes ☼ ⊗. This indicates that the code will be stored for the first door.</p> <p>If user code 6, 7, 8, 9, or 0 is entered, the right LED flashes ⊗☼. This indicates that the code will be stored for the second door.</p>
	NOTE: The 4-digit sequence 0000 invalidates the chosen user code. This is useful to nullify a code until it is reset.	
5	To confirm the entry, repeat the input of the new user code (1234 ; do not include the initial digit), and press E to complete the input.	The controller unit compares the two entries of the user code. If they conform, the new user code is stored. Both LEDs light ● ● and you can now repeat from Step 3 to enter other codes (master code or user codes).

	ACTION	RESULT
6	Press C to ready the keypad module for operation again.	Both LEDs turn off. ⊗ ⊗

5. OPENING THE DOORS (USER MODE)

The keypad module must be ready for operation (both LEDs are off).

	ACTION	RESULT
1	Enter 1 to select the first door. Enter 2 to select the second door. Enter 0 to select both doors.	1 The left LED lights. ● ⊗ 2 The right LED lights. ⊗ ● 0 Both LEDs light. ● ●
2	Enter a valid user code, for example, 1111 , and press E .	The controller unit compares your input to the stored user codes.
	NOTE: You must enter the user code within 20 seconds. If this period is exceeded, the "ready for operation" condition is reestablished (both LEDs are turned off) and you have to start over	
		1 If the first door was selected, and if your input conforms to a stored user code number 1 to 5, the first door is released and can be opened.
		2 If the second door was selected, and if your input conforms to a stored user code number 6 to 10, the second door is released and can be opened.
		0 If both doors were selected, and if your input conforms to a stored user code number 1 to 5 <u>and</u> 6 to 10, both doors are released and can be opened. About 10 seconds elapse between the release of the first door and the second door.
3	If no door is released, an error is indicated.	Both LEDs flash alternately ⚙ ○ and the "ready for operation" condition is automatically reestablished (both LEDs off).

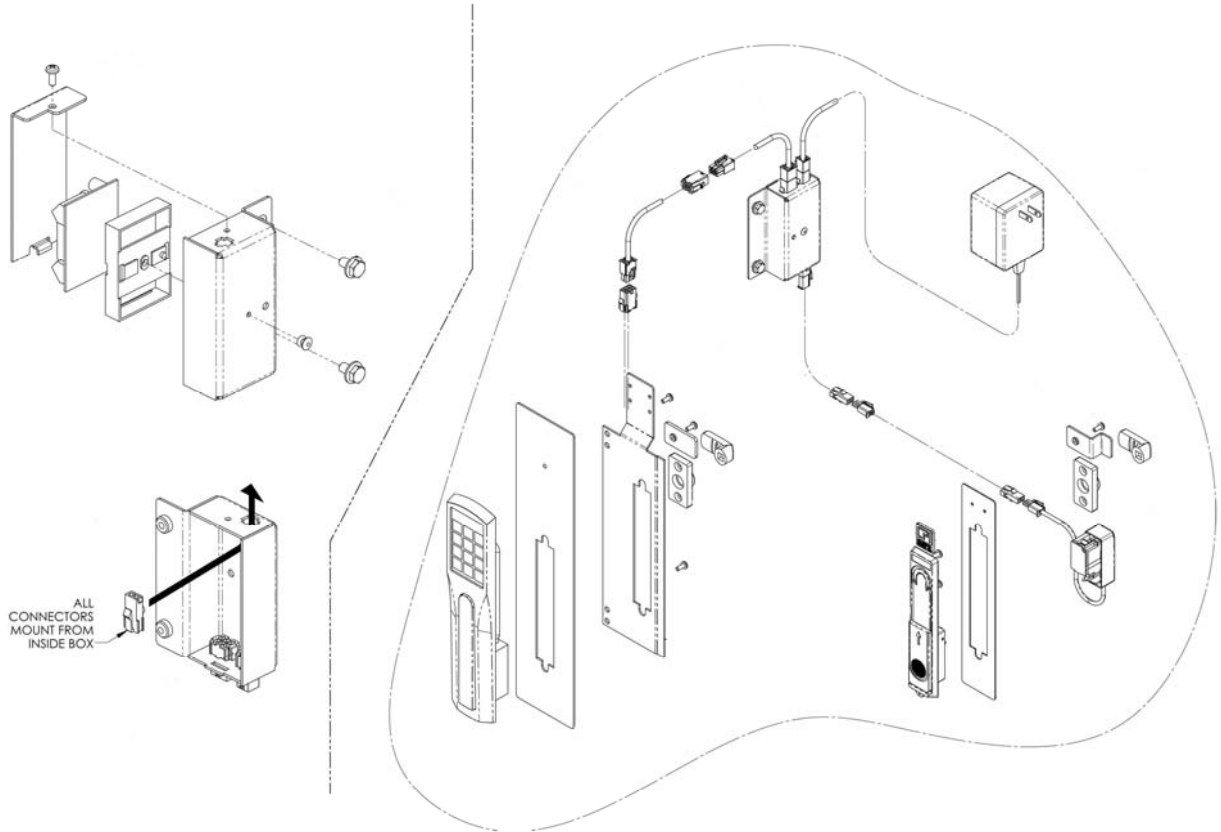
NOTES

Master code: _____

User codes:

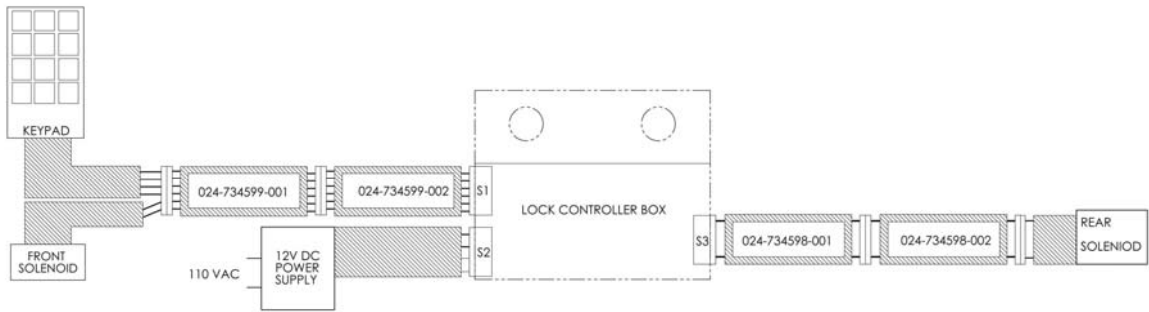
Front door	Rear door
1	6
2	7
3	8
4	9
5	0

APPENDIX A-SHEET 1 OF 4

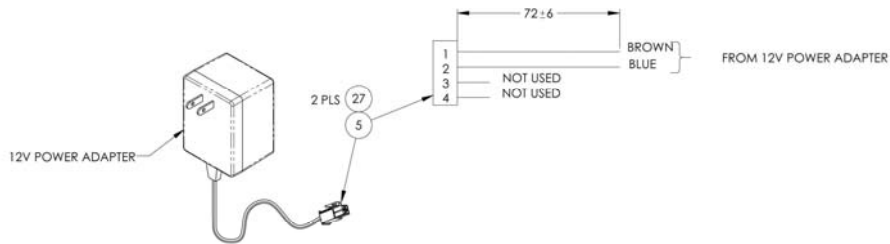
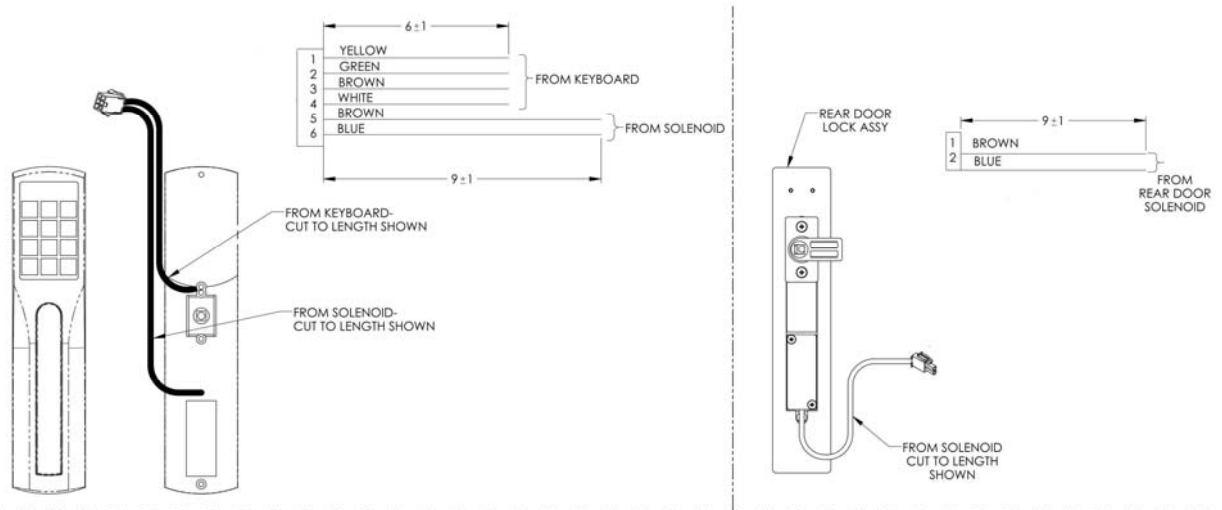


APPENDIX A-SHEET 2 OF 4

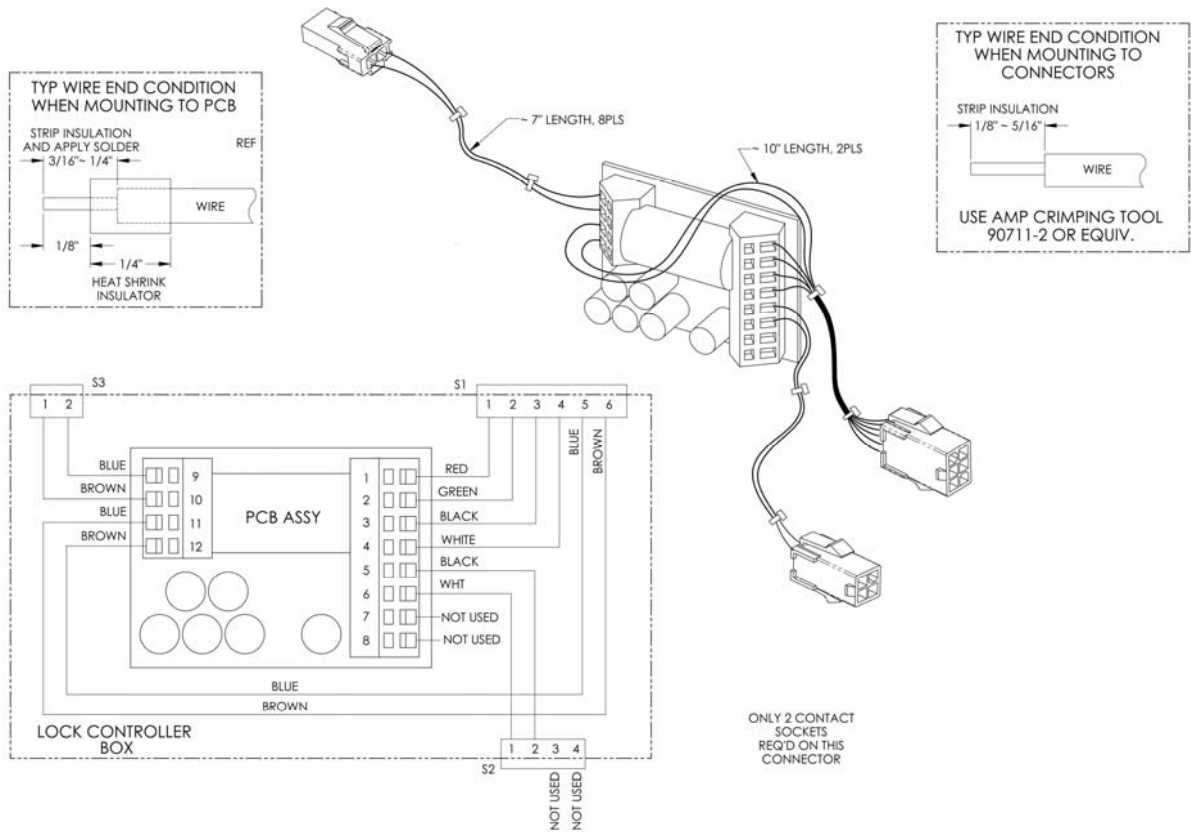
WIRING DIAGRAM- ELECTRONIC LOCK
TERAFRAME



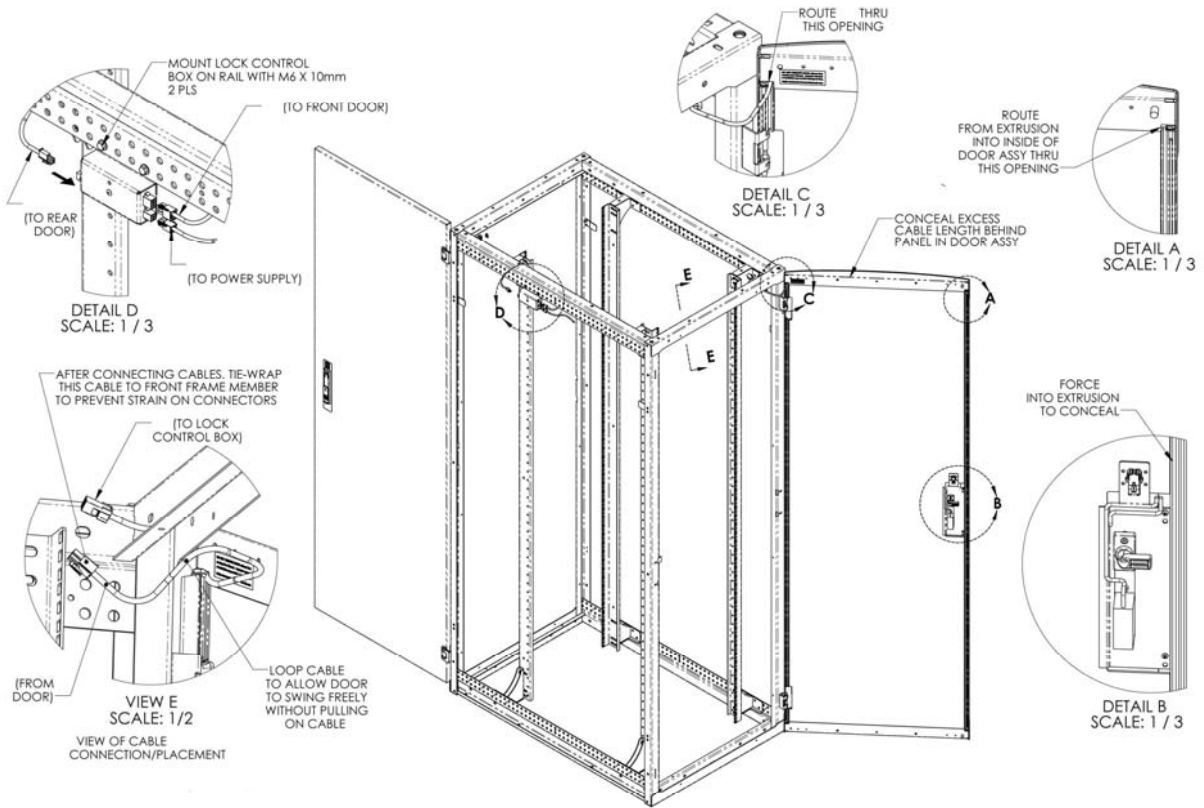
APPENDIX A-SHEET 3 OF 4



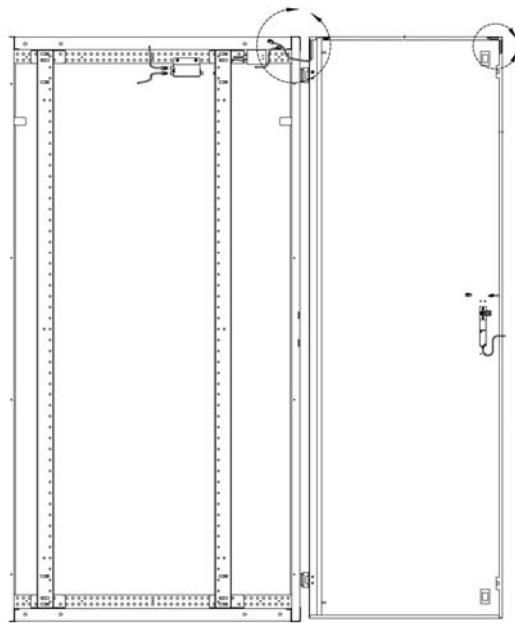
APPENDIX A-SHEET 4 OF 4



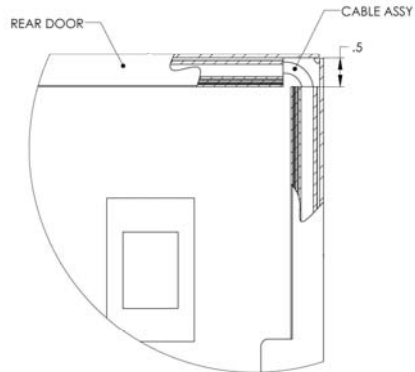
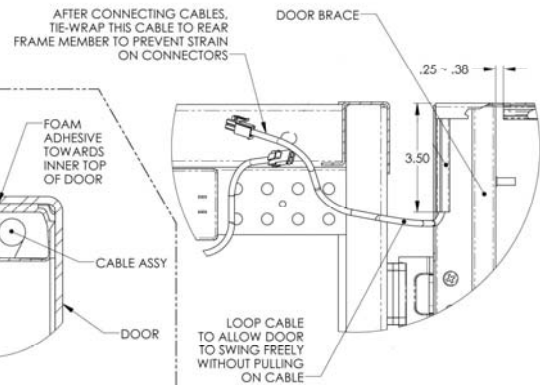
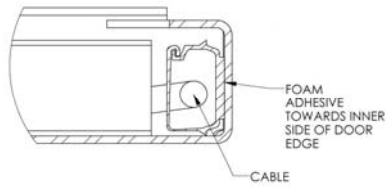
APPENDIX B-SHEET 1 OF 2



APPENDIX B-SHEET 2 OF 2



SECTION VIEW SHOWING
REAR DOOR



APPENDIX C – ELECTRONIC LOCKING SYSTEM QUICK CARD

NOTICE

THE ELECTRONIC LATCH ON THIS CABINET MUST BE POWERED WITH 110VAC TO OPERATE. USE THE KEYS ATTACHED TO THE FRONT DOOR TO REMOVE ONE OF THE SIDE PANELS AND ALLOW ACCESS TO THE POWER CORD.

Symbol	Meaning	Symbol	Meaning
● ●	Both LEDs on	● ⊗	Left LED on, right LED off
⊗ ⊗	Both LEDs off	⊗ ●	Right LED on, left LED off
⊗ ⊗	Both LEDs flash in unison	⊗ ⊗	Left LED flashing, right LED off
⊗ ○	Both LEDs flash alternately	⊗ ⊗	Right LED flashing, left LED off

SYSTEM SELF-CHECK

LED	Action	Result
⊗ ⊗	Both LEDs are off. Connect the power.	Both LEDs light for 4 seconds.
● ●	Controller unit initiates an automatic check.	
⊗ ○	Error occurs during the automatic check.	Both LEDs flash alternately.
⊗ ⊗	No error is detected.	Both LEDs are turned off. The keypad module is ready for operation.

TESTING THE FACTORY-SET USER CODES

ACTION	KEYS	LEDs	NOTES
Test Front	1+1111 E	Left LED on ● ⊗	Front lock opens.
Test Rear	2+1111 E	Right LED on ⊗ ●	Rear lock opens.
Test Both	0+1111 E	Both LEDs on ● ●	Both locks open. About 10 seconds elapse between front and rear lock opening. *
Error Detected		LEDs flash alternately about 8 seconds	Wait for flashing to stop. Reenter user code. Repeated errors increase waiting time, up to 17 minutes.
* If the rear door latch clicks but does not release, check to make sure that the small metal tab has been broken off the bottom of the latch.			

After testing the factory-set codes, you are ready to program your unique master code and user codes. **Carefully guard the current master code, as it controls all code input and changes.**

PROGRAMMING THE MASTER CODE

	ACTION	RESULT
1	Press keys C and E at the same time.	⊗ ⊗ Both LEDS flash in unison.
2	Input the <u>current</u> 6-digit master code and press E . (Factory-set master code: 000000)	● ● Both LEDs on.
3	Press E again, input the <u>new</u> 6-digit master code, and press E .	⊗ ⊗ Both LEDS flash in unison.
4	To confirm, repeat the input of the 6 digits, and press E .	● ● Both LEDs on. New master code accepted.

PROGRAMMING THE USER CODES

	ACTION	RESULT
1	Press keys C and E at the same time.	⊗ ⊗ Both LEDS flash in unison.
2	Input the <u>current</u> 6-digit master code and press E .	● ● Both LEDs on.
3	Enter the number (1 to 10) of the user code to be stored: <ul style="list-style-type: none"> If the user storage number 1, 2, 3, 4, or 5 is entered, the left LED flashes. This indicates that the code will be stored for the first door. If the user storage number 6, 7, 8, 9, or 0 is entered, the right LED flashes. This indicates that the code will be stored for the second door. 	⊗ ⊗ Left LED flashes or ⊗ ⊗ Right LED flashes.
4	Input the new sequence of numbers, consisting of at least 4 and not more than 6 digits (e.g., 1234), and press E to complete the input.	
5	To confirm, repeat the input of the digits, and press E .	● ● Both LEDs on.
6	To program more user codes, repeat from Step 3.	
7	Press C to clear LEDs (or they will go out in about 20 seconds).	⊗ ⊗ Both LEDs off.

OPENING THE DOORS (USER MODE)

	ACTION	RESULT
1	Select door to open: 1 (first door)	● ⊗ Left LED on.
2	2 (second door)	⊗ ● Right LED on.
3	0 (both doors)	● ● Both LEDs on.
4	Enter valid 4- to 6-digit user code (e.g., 1111), and press E .	Selected door(s) open.
5	If error, no door opens. Consult the code programmer.	⊗ ○ LEDs flash alternately, then turn off.

For more information on the CPI Electronic Lock System, contact CPI Tech Support at **800-834-4969** or email techsupport@chatsworth.com.