

# CX-WC13-PS-M1 Series Restroom Control

## INSTALLATION INSTRUCTIONS

### THIS PACKAGE INCLUDES:

- 1 - CM-45/4 SPDT Push Plate Switch
- 1 - CM-2520/48 Combo Switch
- 1 - CX-ED1799L-8 Electric Strike
- 1 - WC13 Multifunction Relay Cabinet
- 2 - CM-SE1 Sign for CM-54
- 1 - WC13-14-15 Sign
- 1 - Transformer
- 1 - Surface Mounting Contact



### 1. GENERAL DESCRIPTION

The Restroom Control Kit allows access in and out of a Restroom, with the ability to secure the door to make patrons aware that the location is either occupied or vacant.

The CX-WC13-PS Series of Restroom Control Kits are controlled by Camden's advanced relay logic controller model CX-33. The CX-33 currently has 2 pre-set modes that will accommodate most Restroom applications. When used to control a Restroom application, the modes most often used will be Mode 7 (normally unlocked) or Mode 8 (normally locked). The default Mode for the CX-WC13-PS is Mode 7 (normally unlocked). Each Restroom Control Kit will have the ability to physically open the door then allow the patron to lock the door once inside. When locked the CX-33 will change the coloring of the inside & outside PUSH TO OPEN buttons from green to red displaying that the Restroom is in use. When the inside PUSH TO OPEN is pressed it will unlock the door, then (physically) open the door and change the coloring of the inside & outside PUSH TO OPEN buttons back to green, displaying that the Restroom is now vacant. The locked Restroom can be unlocked by either pressing the inside PUSH TO OPEN which will reset the system back to unlocked, or by using the crash bar, paddle or turning the knob set to open the door contact circuit and resetting the CX-33.

The CX-WC13-PS Series of Restroom Control Kits use Camden's trademark Aura boards. The Aura circuit board is installed behind the outside PUSH TO OPEN and inside PUSH TO LOCK push buttons and can be seen easily seen by patrons at a distance.

### 2. SPECIFICATIONS

Model	<b>WC13 Relay Cabinet (CX-33)</b>
Voltage	AC Input: 12V to 28V; DC Output: 12 or 24V
Current Supply	2 Amps
Battery Backup	Gel Type (not supplied)
LED Indicator	AC Input and DC Output
Temperature	Operating: 0° C to 49° C (32° F to 120° F) Storage: - 20° C to 70° C ( - 4° F to 158° F)
Inputs	(4) Dry, (1) Wet 5V to 120V AC/DC, Non-Polarity Optically Isolated
Outputs	(3) Form 'C' (SPDT), 3 Amps @ 24V DC
Time Delay	Hold 1 Timer: 0 to 50 seconds Delay 1 Timer: 0 to 15 seconds Hold 2 Timer: 0 to 50 seconds Delay 2 Timer: 0 to 60 seconds Hold 3 Timer: 0 to 50 seconds Delay on Activate: 0 to 10 seconds
Dimensions	11-1/16" H x 7-7/8" W x 2-13/16" D (281mm x 200mm x 72mm)

Model	<b>CM-45</b>
Contact Type	SPDT Form 'C'
Switch Type	Momentary
Contact Rating	15A @ 30 VDC
Temperature Range	-40°F to 140°F (-40°C to 60°C)
Standard Finish	US32/630
Dimensions	4-1/2" H x 4-1/2" W x 1-3/8" D (114mm x 114mm x 34mm)

Model	<b>CM-2520</b>
Contact Type	N/O SPST
Switch Type	Momentary
Contact Rating	3A @ 30 VDC
Temperature Range	-40°F to 140°F (-40°C to 60°C)
Standard Finish	US32/C32D
Dimensions	4-1/2" H x 4-1/2" W x 1-5/16" D (114mm x 114mm x 33mm)

Model	<b>CX-ED1799L-8</b>
Voltage	12/24V AC/DC
Current Draw	300mA@12V 150mA@24V DC
Static Strength	1,500 Lbs.
Dynamic Strength	70 Ft-Lbs.
Endurance	1,500,000 Cycles (Factory Tested) 250,000 Cycles (UL Verified)
Fire Rating	UL 10C/CAN4-S104 3 hrs. (Fail Secure Only)
Mode	Field Selectable Fail Safe/Fail Secure
Operation	AC-Buzz, DC-Silent
Duty	Continuous
Latch Bolt Monitor	SPST, 100mA @ 24V DC
Strike Monitor	SPST, 100mA @ 24V DC
Dimensions	4-7/8" H x 1-5/8" W x 1-21/32" D (124mm x 41mm x 42mm)

### 3. INSTALLATION

#### Operation at a Glance

When the exterior PUSH TO OPEN button is pressed it will trigger the PBTN input on its Aura board causing its N.O. relay contact to send a momentary closure to the outside PUSH TO OPEN on the CX-WC13-PS-M1 allowing the door to swing open. When the interior PUSH TO LOCK button is pressed it will trigger the PBTN input on its Aura board causing its N.O. relay contact to send a momentary closure to inside PUSH TO LOCK causing the CX-WC13-PS-M1 to lock the Restroom and switch the Aura colors from green to red. The inside PUSH TO OPEN button is wired directly to inside PUSH TO OPEN on the CX-WC13-PS-M1.

When pressed the Restroom will unlock and the door will swing open. The Restroom can also be unlocked by opening the door from the inside which will break the door contact circuit causing the CX-WC13-PS-M1 to reset and unlock the door. The Aura's will switch back to green signalling the Restroom is now vacant.

#### Mounting

**IMPORTANT:** Do not apply power to the unit until you have fully read the instructions and have made the required adjustments.

The CX-WC13-PS-M1 cabinet should be mounted in a clean dry location out of direct contact with the elements.

#### Wiring the CX-WC13-PS-M1 Series Restroom Control Kit is as follows:

The CX-WC13-PS-M1 comes from Camden with the CX-33 pre-wired to a labeled set of two terminal strips. This will make the wiring of the push buttons easier since the wiring manual will no longer need to be directly referenced for termination points. A complete wiring diagram is adhered to the inside of the door to provide a layout of the wiring as a reference when wiring the field devices to the kit.

There are two terminal strips that mirror the locations on the CX-33. The left strip is used for power to the CX-33, the PUSH TO OPEN and PUSH TO LOCK buttons, the door position switch, and the Wet trigger. The right strip is for the outputs to drive the strike (Relay 1), door operator (Relay 2), Aura LEDs (Relay3), and to provide DC power for the door strike.

Once all field devices are wired to the CX-WC13-PS-M1, then AC power can be wired in.

**IMPORTANT:** Confirm the electrical panels breaker you are going to be using is currently off. Do not wire the primary terminals of the transformer until the secondary terminals are connected first.

The supplied CX-TRX-5024 transformer will have its secondary terminals wired to the terminals on the top of the left terminal strip marked as "AC". Next, wire the primary terminals to the AC feed to be used. Confirm your connections and apply power by turning on the electrical panel breaker.

#### Selecting a Mode

The CX-WC13-PS-M1 has two Restroom applications built in (Mode 7 & 8). The default mode for the CX-WC13-PS-M1 is Mode 7 (normally unlocked).

Determining which mode is correct for you will be based on whether the Restroom will be normally unlocked (Mode 7) or normally locked (Mode 8).

There are three LED displays that will allow you to see what mode you have selected when advancing through the modes. To change the mode of the CX-WC13-PS-M1 simply press the MENU button once and use the UP button to advance to the desired mode.

**Editing the Settings for a Mode**

Camden builds in typical times for lock release and door operator activation and is ready to use without changing any parameters. If you need to change the timing or delay for an output, it can be done by pressing the "MENU" button within the mode you selected. Once the option is selected you can use the "UP or DOWN" buttons to select the timing needed.

The first option (H & 1 flashing) will be how long relay 1 will be activated for (0-50 seconds). The second option (d & 1 flashing)

will be how long to wait before activating relay 2 (0-15 seconds). The third option (H & 2 flashing) will be how long relay 2 will be activated for (0-50 seconds). The fourth option (d & 2 flashing) will be how long to wait before activating relay 3 (0-15 seconds). The fifth option (H & 3 flashing) will be how long relay 3 will be activated for (0-50 seconds). See chart below.

**Factory Reset (Defaulting the CX-33)**

To return the CX-33 back to its factory default settings you will need to remove power, then hold down the "MENU" button while powering up the CX-33. Once started you will see the firmware version listed then a number "1" will be displayed. Reconnect your power and press the "MENU" button once then use the "UP" or "DOWN" button to advance to the desired mode. Fully test the operation of the CX-WC13-PS-M1 for proper functionality.

Display (M)	Description (Mode you are in)	Parameters (1-15)
H, then 1	Relay 1 Hold Time	0.0 to 50 seconds
d, then 1	Relay 2 Delay Time	0.0 to 15 seconds
H, then 1	Relay 2 Hold Time	0.0 to 50 seconds
d, then 1	Relay 3 Delay Time	Depends on Mode
H, then 1	Relay 3 Hold Time	0.0 to 50 seconds
d	Sets the display ON or OFF during operating mode	ON or OFF
A	Input delay on Activate. If other than 0.0 is selected, the input must be held in for the time period chosen before the CX-33 will activate.	0.0 to 10 seconds
1	Set Dry Input 1 to activate on normally open or normally closed contact.	N/O OR N/C
2	Set Dry Input 2 to activate on normally open or normally closed contact.	N/O OR N/C
3	Set Dry Input 3 to activate on normally open or normally closed contact.	N/O OR N/C
4	Set Dry Input 4 to activate on normally open or normally closed contact.	N/O OR N/C
5	Set Dry Input 5 to activate on normally open or normally closed contact.	N/O OR N/C

**SURFACE MOUNT RESTROOM INSTALLATION**

1. Place the white vinyl sign behind the surface aura enclosure and place them against the mounting wall.
2. Use the #10 x 1" pan head screws with the green pvc anchors provided to hold the white vinyl sign and the aura enclosure against the wall.

**Note: White vinyl sign does not come with the CM-45/4 - 4 1/2" 'Push To Open'.**

3. Place all the square rubber pads inside the flush aura enclosure. Insert the aura board inside the flush aura enclosure, making sure the screw holes on the aura board align with the screw holes inside the surface aura enclosure. Use the #6 x 3/8" self-tapping screws to tighten Aura board in place.
4. Place the Aura insert inside the surface aura enclosure, making sure the mounting screw holes on the aura insert and the surface aura enclosure align.

**FOR CM-45/454SE1, CM-45/854SE1 & CM-45/4 SWITCHES**

- a. Use the 6-32 hex head screws to tighten the aura insert slightly.
- b. Fit in the assembled CM-45/4 by locating the screws with the holes on the backplate.
- c. Fit the hex key through the hole on the face plate and completely tighten the 6-32 screws in place.

**FOR CM-2520-4854SE1 COMBO SWITCH**

- a. Fit the plastic spacer inside the aura insert
  - b. Place the combo switch inside the aura insert, making sure the mounting holes on the aura and on the back plate align
  - c. Use the 6-32 Phillips screws to tighten in place.
5. Apply the label to the black vinyl as required.

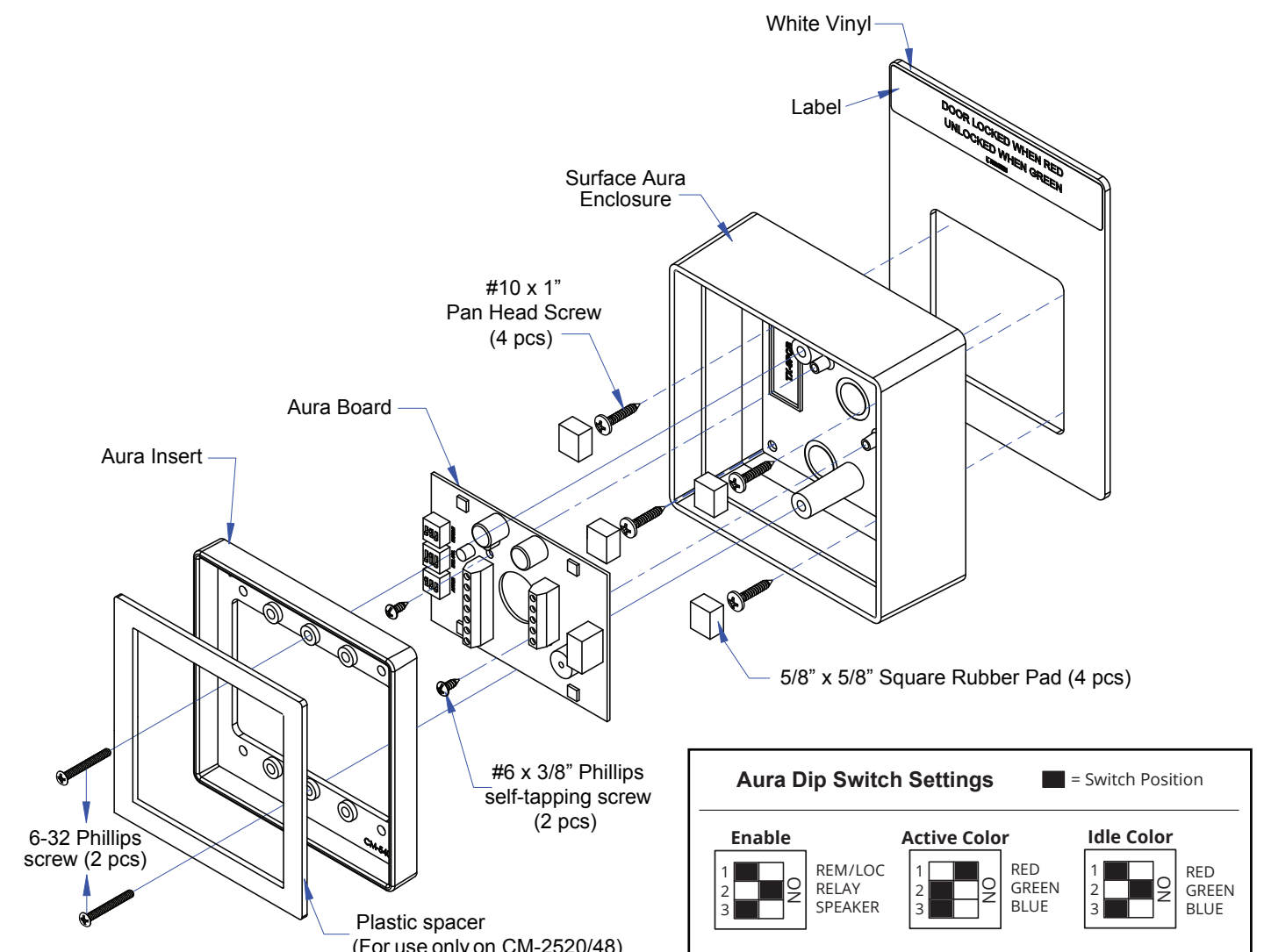


Figure 3.1 Surface Mounting

**FLUSH MOUNT RESTROOM INSTALLATION**

1. Prepare the cut-out for the unit and fit in the dry wall bracket.
  2. Slide in the black vinyl behind the flush aura enclosure and fit them inside the dry wall bracket.
- Note: Black vinyl does not come with the CM-45/4 - 4 1/2" 'Push To Open'.**
3. Ensure the two mounting holes on the bracket and the Flush aura enclosure align. Use the 8-32 phillips screws to completely tighten in place.
  4. Place the aura board inside the flush aura enclosure, making sure the screw holes on the aura board align with the screw holes inside the Flush aura enclosure. Use the #6 x 3/8" self-tapping screws to tighten Aura board in place.
  5. Place the Aura insert inside the Flush aura enclosure, making sure the mounting screw holes on the aura insert and the flush aura enclosure align.

**FOR CM-45/455SE1, CM-45/855SE1 & CM-45/4 SWITCHES**

- a. Use the 6-32 hex head screws to tighten the aura insert slightly.
- b. Fit in the assembled Push plate by locating the screws with the holes on the backplate.
- c. Fit the hex key through the hole on the face plate and completely tighten the 6-32 screws in place.

**FOR CM-2520-4855SE1 COMBO SWITCH**

- a. Fit the plastic spacer inside the aura insert.
  - b. Place the combo switch inside the aura insert, making sure the mounting holes on the aura and on the back plate align.
  - c. Use the 6-32 Phillips screws to tighten in place.
6. Apply the label to the black vinyl as required.

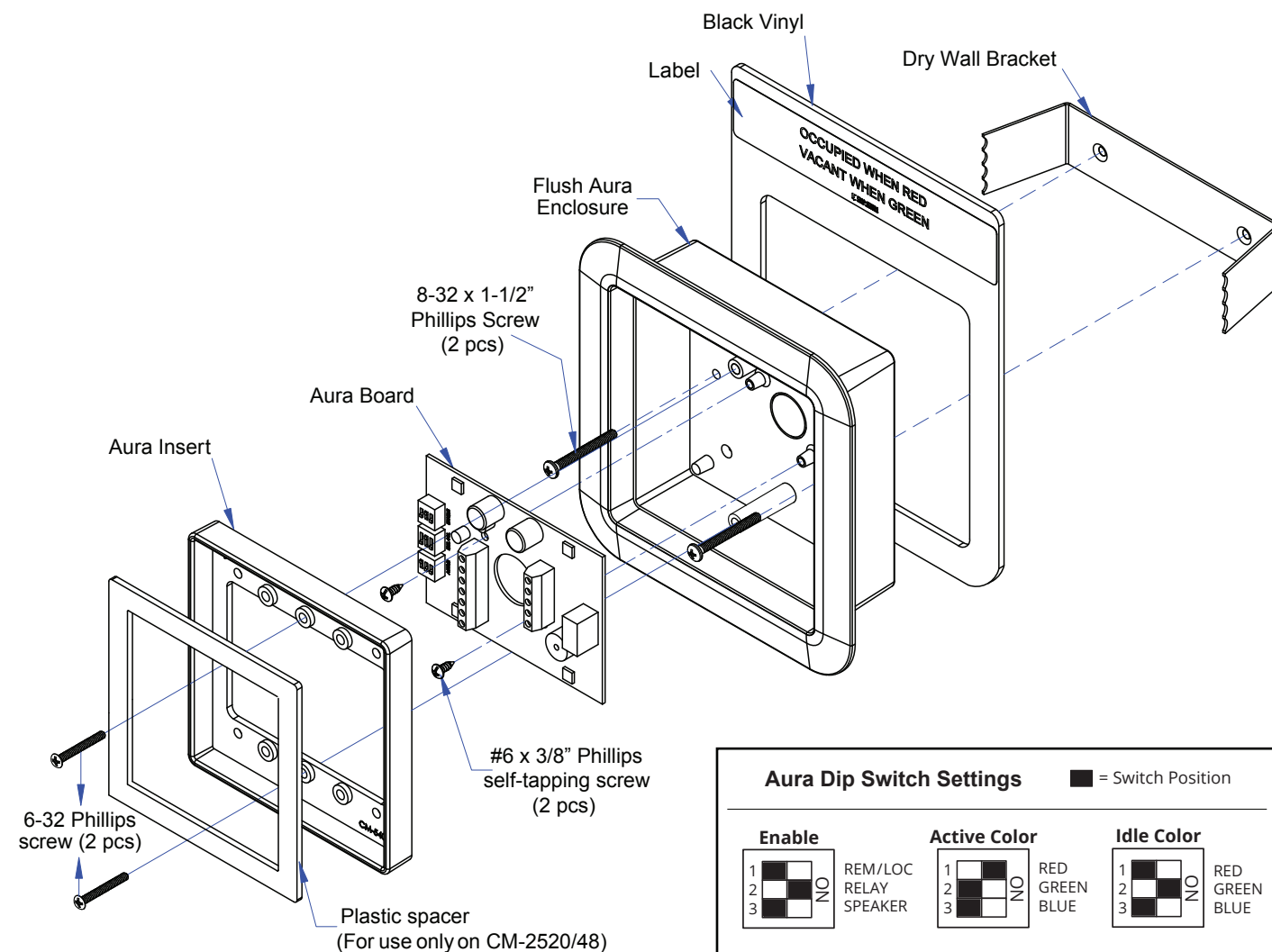


Figure 3.2 Flush Mounting

**CX-ED1799L-8 ELECTRIC STRIKE INSTALLATION**

**Note:**

- The products are intended to be installed in accordance with the installation wiring diagram, mechanical assembly drawings provided with each product, the local authority having jurisdiction (AHJ) and the electric code, NFPA 70. When installed in fail secure mode, the local authority shall be consulted with the regards to the use of possible panic hardware to allow emergency exit from the secure area.
- The electric door strike shall be installed in such a way and in such a location so as to not impair the operation of an emergency exit device or panic hardware mounted on the door.

**INSTALLATION**

1. Check that the door jamb has a cutout that fits the strike assembly. If not, refer to figure 4.2 for guidance.
2. Follow the instructions in the following CONNECTIONS subsection to connect the wires.
3. Use the 12-24 x 1/2" machine screws provided to mount the strike onto the door jamb.
4. Test the fit of the electric strike in the mortise. If necessary, adjust it until it fits properly.

**ANSI FRAME**

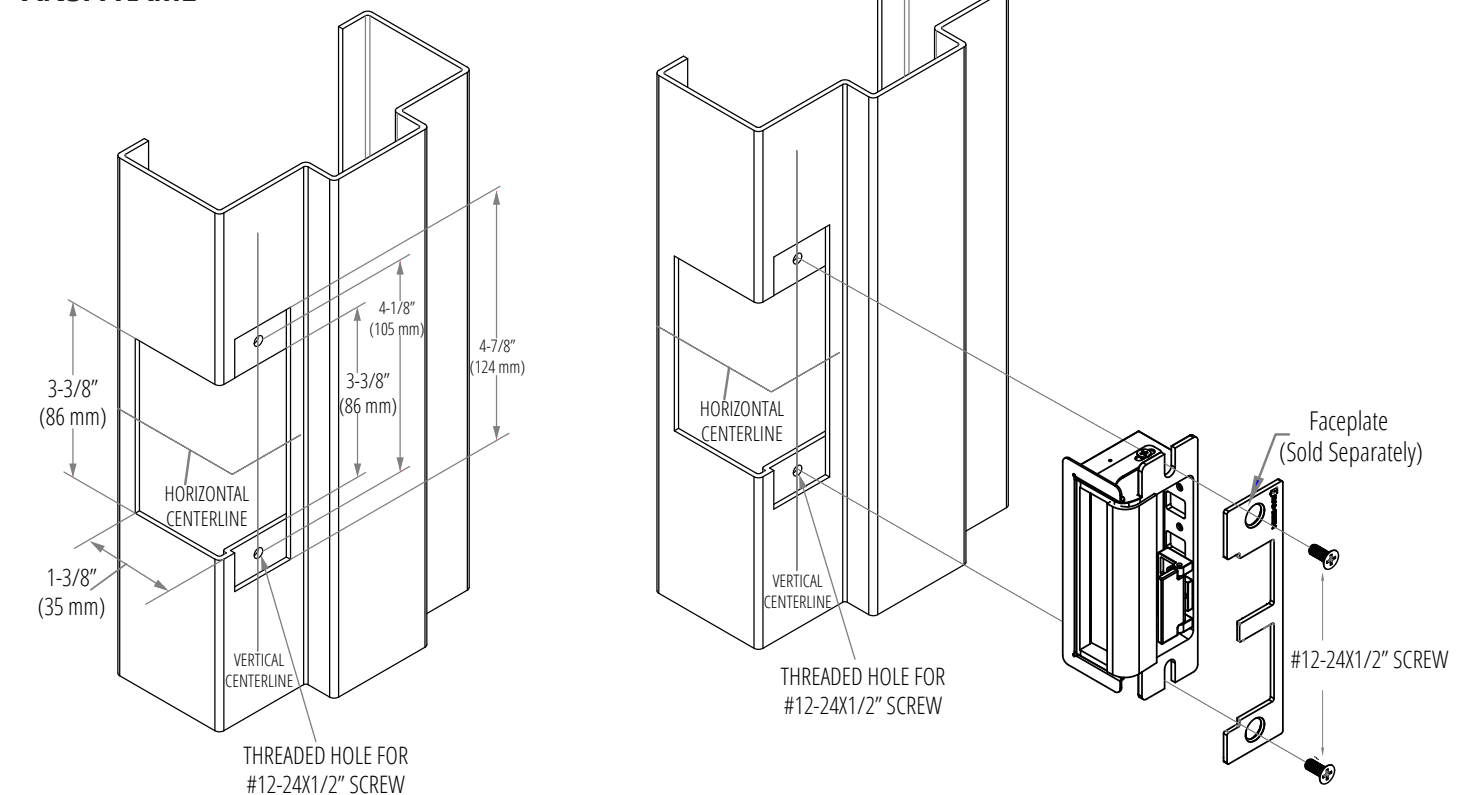
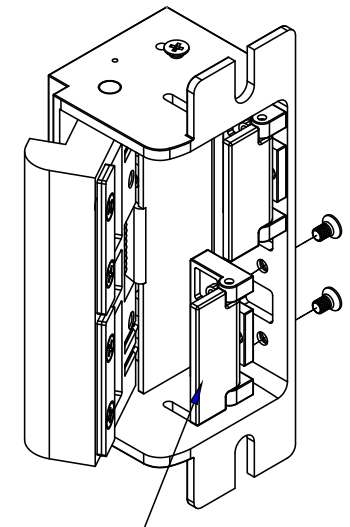


Figure 3.4 Cutout Dimensions

**LATCH BOLT INSTALLATION**

**Note:** Figures show typical installation. The dead bolt bracket, can be mounted in alternate locations depending on RH or LH installation.



Latch Bolt Monitor

Figure 3.3 CX-ED1799L Latch Bolt Installation

**GAP ADJUSTMENT BETWEEN KEEPER AND LATCH**

The strike comes with four keeper shims included in the package for adjusting the gap between the keeper and latch. To modify the gap,

1. First loosen and remove the two set screws that secure the keeper shims. (see Figure 4.3)
2. Add or remove shims as needed to achieve the desired gap between the latch and keeper.
3. Once the gap is adjusted, securely tighten the two set screws to keep the shims in place.

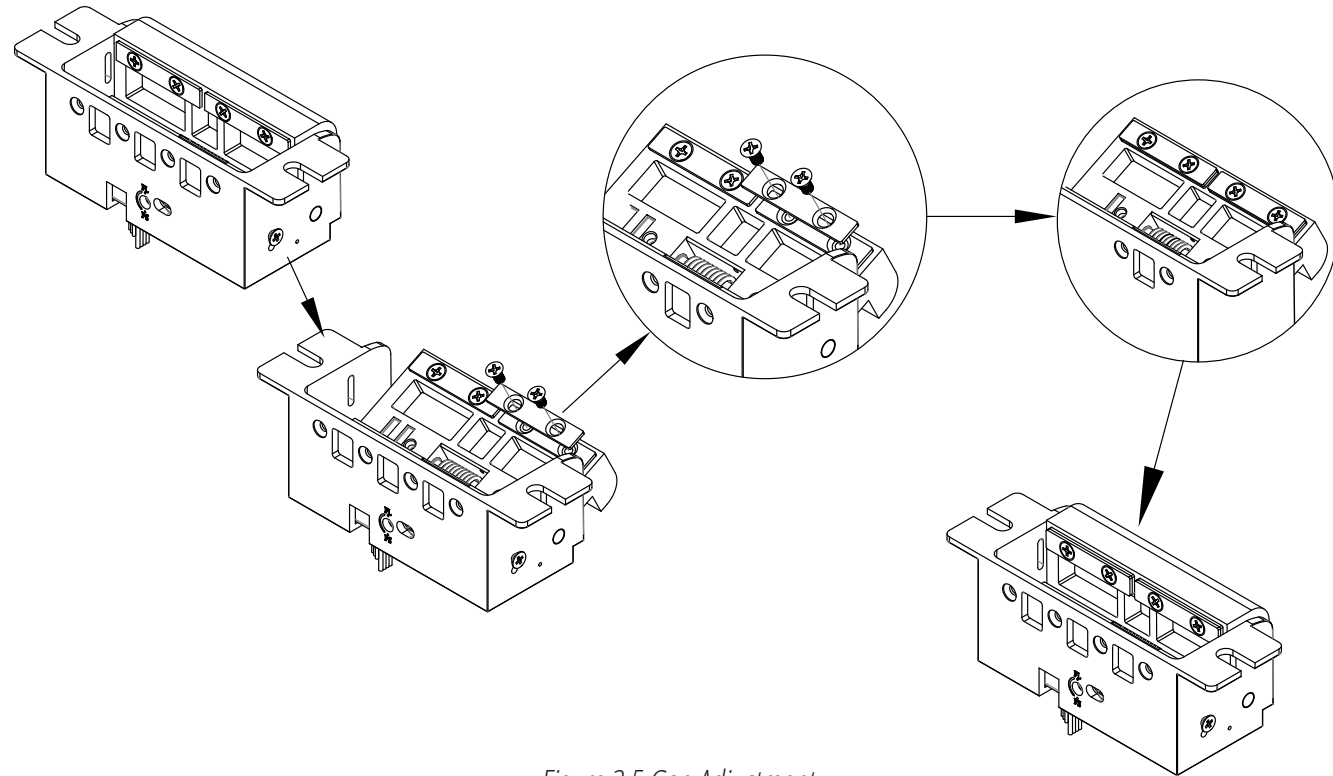


Figure 3.5 Gap Adjustment

**DEADBOLT BRACKET INSTALLATION**

1. Place the deadbolt bracket inside the strike opening. (see Figure 4.4)
2. Align the key on the bracket to fit the key slot on the strike. Ensure the bracket lock to the strike body.
3. With the screw holes aligned, take the supplied # 4-40 x 3/16" Screws, and tighten the bracket in place.

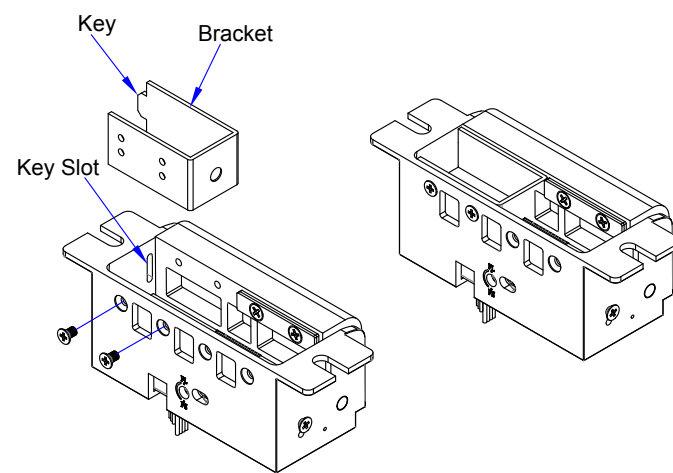


Figure 3.6 Deadbolt Bracket Installation

**CONNECTION**

POWER	
12VDC	24VDC
Red/Black: +12V	Red: +24
Blue/Green: Ground	Green: Ground

A varistor is provided to protect/prevent strike from spikes. Connect varistor between input wires. (See Figure 4.5)

**Note:** For UL 294 / UL 1034 compliance, the door strikes are to be powered via a UL 294/ UL 603 class 2 power limited output from a control panel and or power supply. Furthermore, when powered by AC/DC the units shall use a UL regulated UL 294/ UL 603 power limited class 2 output rated 12/24V with AC on indicator.

**Latch Bolt Monitor**

This SPST monitor provides position status for the lockset latch bolt. When the latch is engaged, this monitor will provide a contact closure between the COM (white) and NO (purple) wires.

**Strike Monitor Operation**

The Strike Monitor provides status information for the operation of the strike. When the strike is activated this Form C monitor changes state.

**Door Contact**

The provided concealed door contact provides the ability to monitor the status of the door in conjunction with the latch bolt monitor. The door contact can be monitored separately or can be connected in series with the latch bolt monitor. The door contact operates with the same logic as the latch bolt monitors. It provides an OPEN connection when the door is open and a CLOSED connection when the door is closed.

**4. CX-ED1799L-8 OPERATION**

The strike is designed to operate in fail-secure mode by default. However, if needed, it can be changed to fail-safe mode by adjusting the mode screw as follows (See Figure 5.1):

1. Loosen the set screw.
2. Turn the mode screw counterclockwise (CCW) to enable fail-safe mode or clockwise (CW) to enable fail-secure mode.
3. Tighten the set screw.

**Note:** Refer to the CX-ED1799L Instructions Manual for more information.

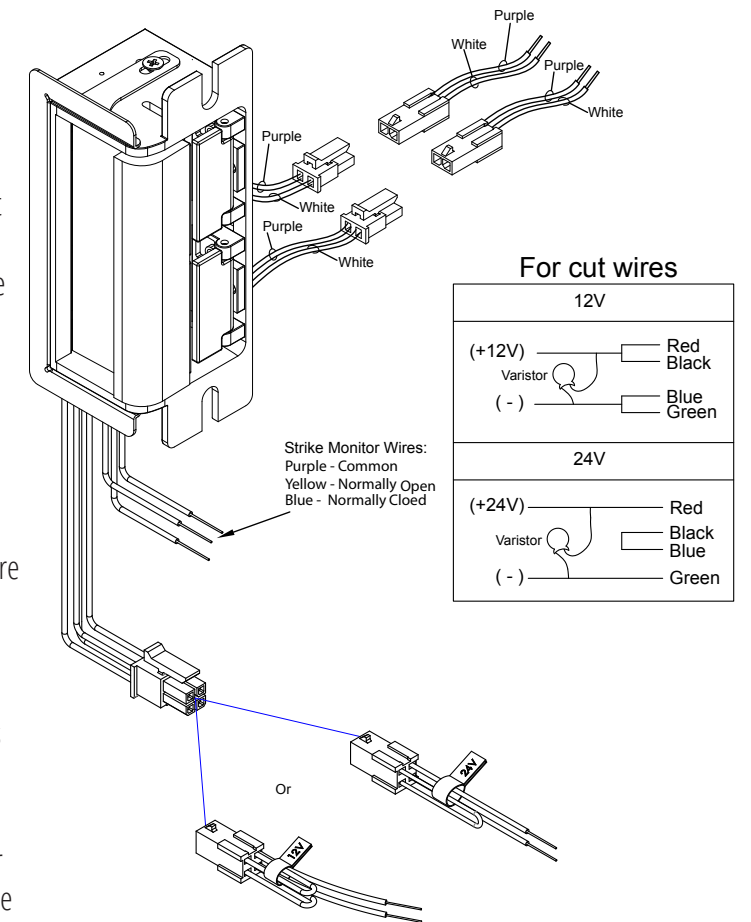


Figure 3.7 Bolt Connection Options

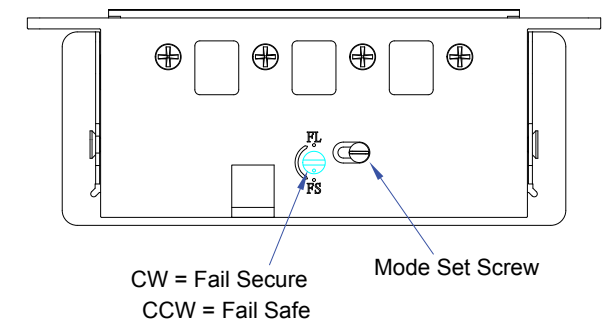


Figure 4.1 Strike Operation

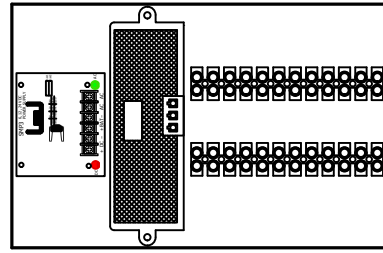
**5. ORDERING INFORMATION FOR REPLACEMENT PARTS**

Item	Part Number	Description
1	60-31A041	Blue/Red/Green Aura PC Board
2	60-42C012	Square Aura Insert
3	60-40E033	Advanced Logic Control Relay and 2 Amp Power Supply in pre-wired metal cabinet
4	CX-MDA	Magnetic Door Contact
5	60-42C019	Mounting Box, Flush Aura Enclosure. Flame/Impact Resistant Black Polymer (ABS) 6-1/2"W X 6-1/2"H X 2"D
6	60-42C010	Mounting Box, Surface Aura Enclosure. Flame/Impact Resistant Black Polymer (ABS) 5-1/4"W X 5-1/4"H X 2"D
7	60-81C021	English Self-Adhesive Vinyl Sign "WAIT FOR DOOR TO CLOSE"
<b>Black Vinyl &amp; Sign for Flush Aura Enclosure</b>		
8	CM-SFE1	Black Vinyl & English Label "DOOR LOCKED WHEN RED/UNLOCKED WHEN GREEN" & "OCCUPIED WHEN RED/VACANT WHEN GREEN"
9	CM-SFF1	Black Vinyl & French Label "OCCUPÉ/LIBRE" & "PORTE BARRÉE/PORTE DÉBARRÉE"
10	CM-SFFE1	Black Vinyl & English Label "DOOR LOCKED WHEN RED/UNLOCKED WHEN GREEN" & "OCCUPIED WHEN RED/VACANT WHEN GREEN" Black Vinyl & 2-sided French Label "OCCUPÉ/LIBRE" & "PORTE BARRÉE/PORTE DÉBARRÉE"
<b>White Vinyl &amp; Sign for Surface Aura Enclosure Installed</b>		
11	CM-SE1	White Vinyl & English Label "DOOR LOCKED WHEN RED/UNLOCKED WHEN GREEN" & "OCCUPIED WHEN RED/VACANT WHEN GREEN"
12	CM-SF1	White Vinyl & French Label "OCCUPÉ/LIBRE" & "PORTE BARRÉE/PORTE DÉBARRÉE"
13	CM-SEFE1	White Vinyl & English Label "DOOR LOCKED WHEN RED/UNLOCKED WHEN GREEN" & "OCCUPIED WHEN RED/VACANT WHEN GREEN" White Vinyl & 2-sided French Label "OCCUPÉ/LIBRE" & "PORTE BARRÉE/PORTE DÉBARRÉE"

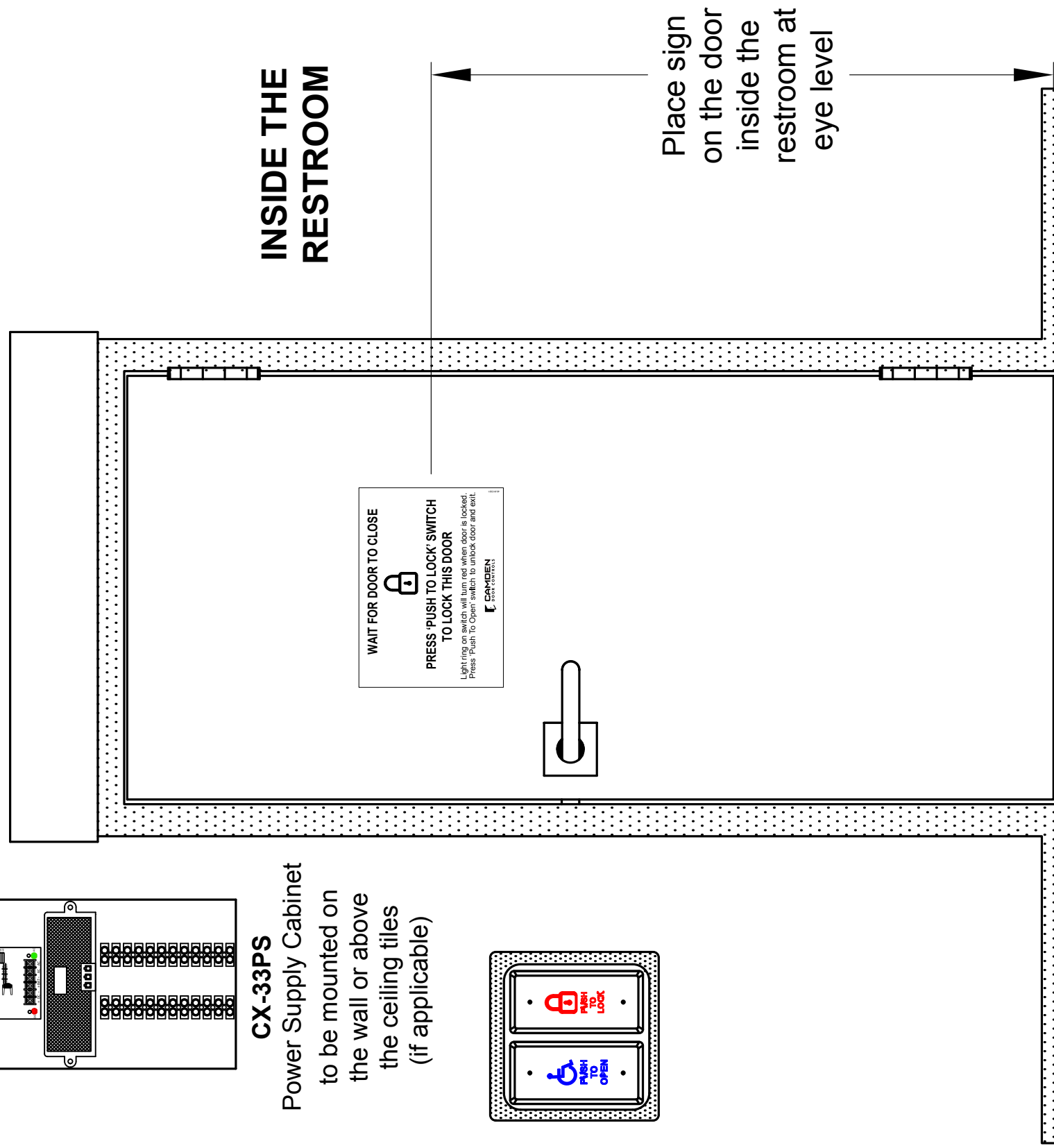
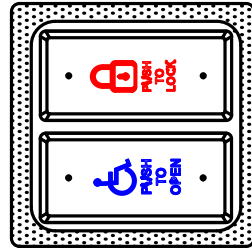
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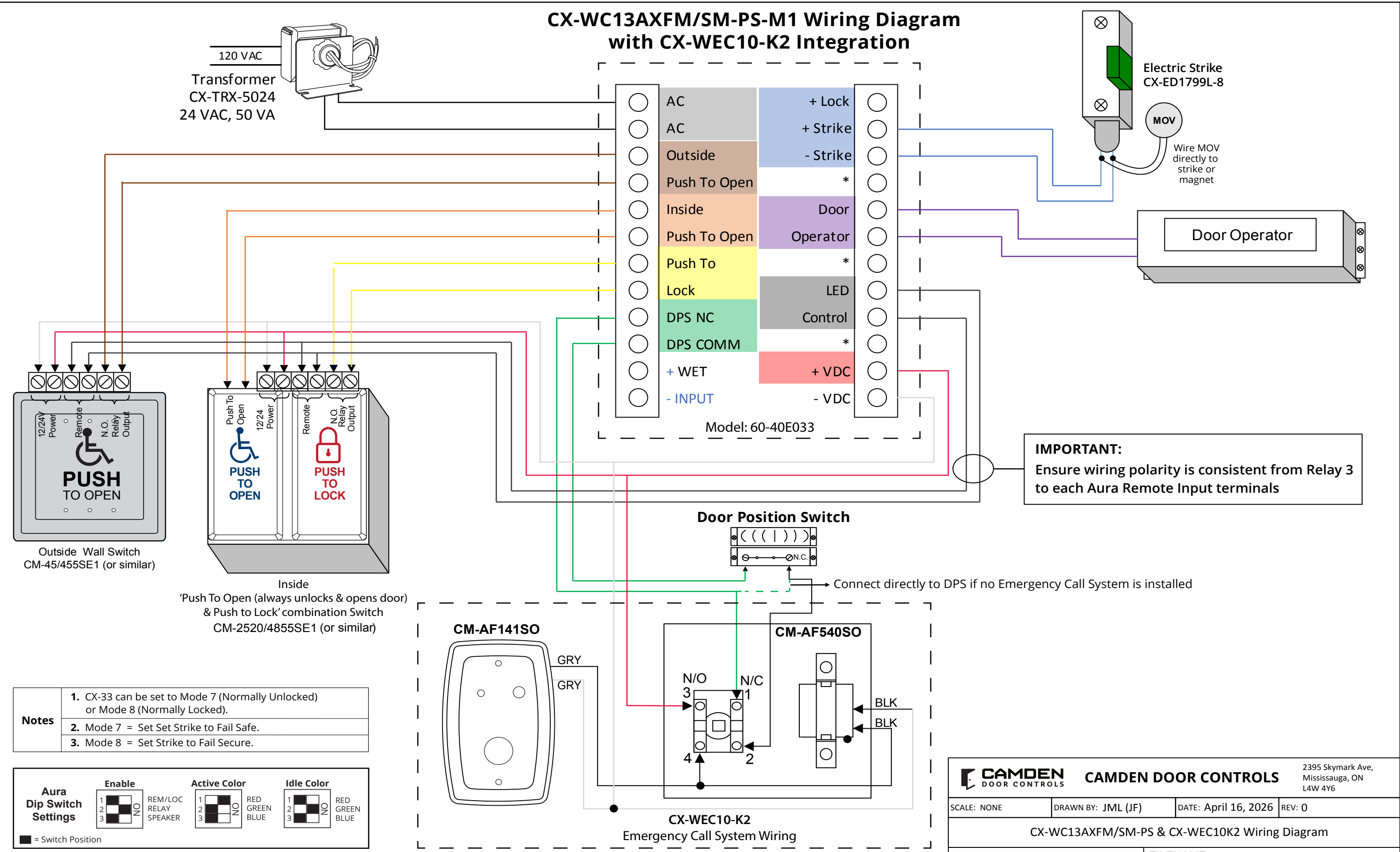
**Questions? Call us toll-free at 1-877-226-3369 or technical support 905-366-3377 (ext. 505)**



**CX-33PS**  
Power Supply Cabinet  
to be mounted on  
the wall or above  
the ceiling tiles  
(if applicable)



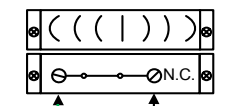
### CX-WC13AXFM/SM-PS-M1 Wiring Diagram with CX-WEC10-K2 Integration



Outside Wall Switch  
CM-45/455SE1 (or similar)

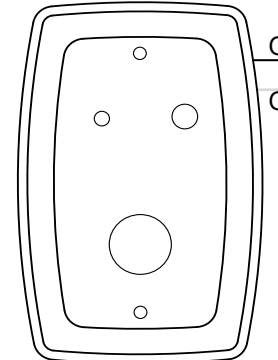
Inside  
'Push To Open (always unlocks & opens door)  
& Push to Lock' combination Switch  
CM-2520/4855SE1 (or similar)

#### Door Position Switch

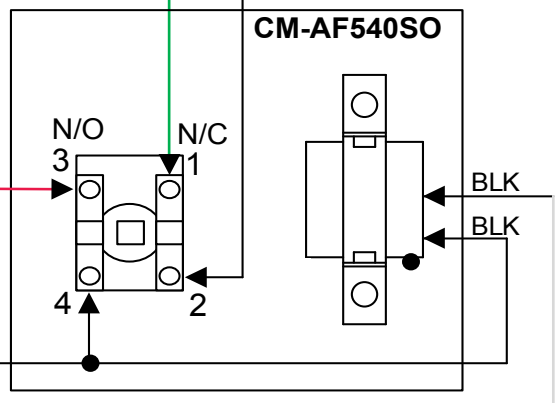


Connect directly to DPS if no Emergency Call System is installed

#### CM-AF141SO

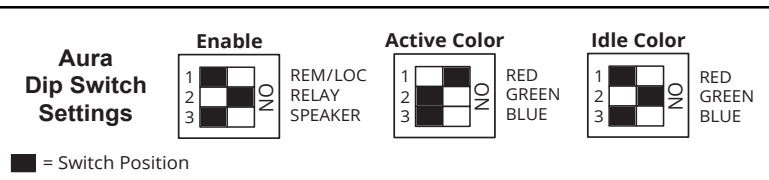


#### CM-AF540SO



#### CX-WEC10-K2 Emergency Call System Wiring

- Notes**
1. CX-33 can be set to Mode 7 (Normally Unlocked) or Mode 8 (Normally Locked).
  2. Mode 7 = Set Set Strike to Fail Safe.
  3. Mode 8 = Set Strike to Fail Secure.



		2395 Skymark Ave, Mississauga, ON L4W 4Y6	
SCALE: NONE	DRAWN BY: JML (JF)	DATE: April 16, 2026	REV: 0
CX-WC13AXFM/SM-PS & CX-WEC10K2 Wiring Diagram			
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