

CX-WC17SL-PS Series
Restroom Kit
INSTALLATION INSTRUCTIONS



THIS PACKAGE INCLUDES:

Column Switches:

- 1 - CM-8536/4-LED Column™ Switch
- 1 - CM-8536/8B-LED Column™ Switch
- 1 - CM-8536/4 Column™ Switch
- 12 - #14 x 1-1/2" Self Tapping Screws
- 12 - Anchors
- 12 - Concrete Anchors
- 12 - 1/4-20 x 1" S/S Pan HD PH Screws

4 - Wire Nuts

- 2- #10 x 1-1/4" Wood Screws
- 1 - Paper Template (per Faceplate)
- 4 - #12-24 x 1/2" Screws
- 2 - Mounting Brackets
- 1 - Varistor
- 1 - ESP1B, ESP3B and ESP4B Faceplates

1 - Transformer

- 1 - Surface Mounting Contact
- 1 - 7" x 5" WC Sign
- 1 - "Occupied When Red" Sign
- 1 - "Locked When Red" Sign
- 4 - Foam Tape

Electric Strike:

- 1 - CX-ED2079 Electric Strike
- 1 - 4 PIN Power Connector (12V)
- 1 - 4 PIN Power Connector (24V)

CX-33PS Logic Relay:

- 1 - Metal Cabinet
- 1 - Hardware Kit
- 1 - Pre-wired CX-33 Relay
- 1 - Power Supply

1. GENERAL DESCRIPTION

The Camden CX-WC17SL-PS Restroom Control Kit allows access in and out of a restroom with the ability to secure the door once inside. The Kit consists of Column™ Switches that provide built-in annunciation with LED illumination.

The CX-WC17SL-PS Restroom Control Kit is controlled by Camden's CX-33 advanced relay logic controller (designed to support virtually any automatic door application).

The designation "PS" in the part number reflects that this kit now comes pre-wired in a metal enclosure with a power supply that is ready to accept all field wiring.

Operation at a Glance

The CX-WC17SL-PS has two modes: **Mode 7** and **Mode 8**.

Mode 7 "Normally Unlocked" condition: When the exterior PUSH to OPEN Column™ Switch is pressed, it will send momentary closure to the outside PUSH TO OPEN terminal on the CX-WC17SL-PS allowing the door to swing open. When the interior PUSH TO LOCK Column™ Switch is pressed it will send a momentary closure to the to inside PUSH TO LOCK terminal on the CX-WC17SL-PS causing it to lock the restroom and turn on the annunciator LED.

When the inside PUSH TO OPEN Column™ Switch is pressed it will send a momentary closure to the inside PUSH TO OPEN terminal

on the CX-WC17SL-PS causing it to unlock the door and open it. The annunciator LED will now turn off signaling the restroom is now vacant. The restroom can also be unlocked by opening the door from the inside which will break the door contact circuit causing the CX-WC17SL-PS to reset and unlock the door.

Mode 8 "Normally Locked" condition: When the exterior PUSH to OPEN Column™ Switch is pressed, it will unlock the strike and trigger the door operator to open the door. Once in the restroom and the PUSH to LOCK Column™ Switch is pressed, it will keep the door locked and disable the exterior PUSH to OPEN Column™ Switch and turning annunciation LED on. When exiting the restroom, you can either press the inside PUSH to OPEN column switch to unlock the door and open the door or you can push the crash bar, paddle or turn the knob set to break the door contact circuit, which will also unlock the door and reset the system. The annunciation LED will turn off, signaling the restroom is available. Note: While exiting, the user can also use the lever handle to open the door; in this case, the system will reset to its initial condition (Mode 7 or Mode 8), and the red light will turn green, allowing other users to use the restroom.

2. SPECIFICATIONS

Model	CM-8536/4, CM-8536/8B-LED
Contact Rating	15 Amp @ 30 VDC
Contacts	2 x SPST momentary Contact Switch (Form C), UL Listed
LED Current Rating	≤ 20mA @ 12 to 24 VDC
Construction	Heavy duty extruded aluminum
Finish	Anodized clear, black, blue, dark bronze
Mounting	4 x #14 wood screws with anchors or 1/4"-20 S/S machine screws
Actuator Width	3" (76mm)
Dimensions (overall)	37-1/2" H x 5-7/8" W x 2-3/8" D (955mm x 150mm x 60.3mm)

Model	CX-ED2079
Voltage	12/24V AC/DC
Current Draw	300mA@12V, 150mA@24V DC
Static Strength	1,000 Lbs.
Dynamic Strength	50 Ft-Lbs.
Endurance	700,000 Cycles (Factory Tested) 500,000 Cycles (UL Verified)
Mode	Field Selectable, Fail Safe/Fail Secure
Mech. Adjustment	Strike Body/Faceplate
Operation	AC-Buzz, DC-Silent
Duty	Continuous
Dimensions	4-7/8" H x 1-7/8" W x 1-7/32" D (124mm x 47mm x 31mm)

3. CX-33PS MOUNTING, WIRING & MODE SELECTION

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

The CX-WC17SL-PS Restroom Control Kit includes the CX-33PS Advanced Logic Relay. A complete wiring diagram is included in this manual.

Mounting

The CX-WC17SL-PS cabinet should be mounted in a clean dry location out of direct contact with the elements.

Model	WC17SL-PS Relay Cabinet CX-33PS
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)

Wiring

The CX-WC17SL-PS comes from Camden with the CX-33PS 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 Column™ Switch, 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), Occupied light (Relay3), and to provide VDC power for the door strike.

Once all field devices are wired to the CX-WC17SL-PS 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 panels breaker.

Mode Selection

Mode selection depends on the user requirements;

- If the user wants the restroom unlocked during the idle state, use Mode 7.
- If the user wants the restroom locked during the idle state, use Mode 8. Additional contact block for Mode 8 - Fail Secure is not included; order Part Number 60-66C000.

Note: The default mode for the CX-WC17SL-PS is Mode 7 (normally unlocked).

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-WC17SL-PS, simply press the MENU button once and use the UP button to advance to the desired mode.

Mode Editing

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 the Table 3.1

Factory Reset (Defaulting the CX-33)

To return the CX-33 back to its factory default settings, you must remove the power, then hold down the MENU button while powering up the CX-33. Once started, you will see the firmware version listed, and 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. For proper functionality, fully test the operation of the CX-WC17SL-PS.

Figure 3.1 Adjusting the Settings in CX-33

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 2	Relay 2 Hold Time	0.0 to 50 seconds
d, then 2	Relay 3 Delay Time	Depends on Mode
H, then 3	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 Wet Input 5 to activate when voltage applied or removed. N/O: voltage applied to activate; N/C: voltage removed to activate.	N/O OR N/C

4. CM-8536-LED COLUMN SWITCH INSTALLATION

Code Requirements: If installed according to these instructions the CM-8536-LED Column™ Switch will meet the requirements of the California Building Code (Section 1117B.6, Date: 2009), and Section 3.8.3.3.17(b) of the Ontario Building Code.

CM-8536-LED complies with the National Building Code of Canada reference to CSA Regulation 5.2.9.3 (c) ii.

The CM-8536-LED Column™ Switch is a VDC device only and will accept a range of VDC power from 12VDC to 24VDC (+/- 10%). Do not connect AC voltage to the CM-8536-LED Column™ Switch at any time.

Disassemble the Back Box:

1. Unpack the pre-assembled CM-8536-LED Column™ Switch. The Column™ Switch is sold with its mounting Back Box attached. You need to disassemble the Back Box to mount on the wall.
2. Unscrew the six 4-40 x 3/16” Phillips Screw along the sides of the Column™ Switch to detach the Back Box. (Figure 4.1)

Determine the Wall or Frame Mounting Locations:

3. Determine and mark the optimum height from the finished floor. If using an in-wall electrical box, center the Back Box over the electrical box, while lining up the top edge with the mark. The bottom of the Switch should be located between 3” to 8” (76mm to 203mm) off the finished floor as per site conditions or code requirements.
4. Use a level to ensure the Column™ Switch is plumb and level, locate and mark the mounting and hardwire locations on the wall or frame.

Drill Mounting Screw Holes on the Back Box:

5. Locate and mark the matching holes for mounting screws anywhere along the Guide Channels of the Back Box and align them with the corresponding anchor locations on the wall. (Figure 4.2 and 4.3)
6. Drill the mounting screw holes on the Back Box using drill bit 17/64” for either #14 tapping screws or 1/4”-20 machine screws. (Figure 4.2 and 4.3)

Drill the Hardwiring Hole on the Back Box:

7. Locate and mark a through hole near the Column™ Switch wires in the Back Box for the hardwiring connection from the wall to the Column™ Switch wires. We recommend drilling a 3/4” Ø hole along the Guide Channels at the upper end of the Back Box between 8” and 12” from the top of the Column™ Switch. You may drill a different size that matches your in-wall wiring, this hole location must align with the wires from the wall or in-wall electrical box.

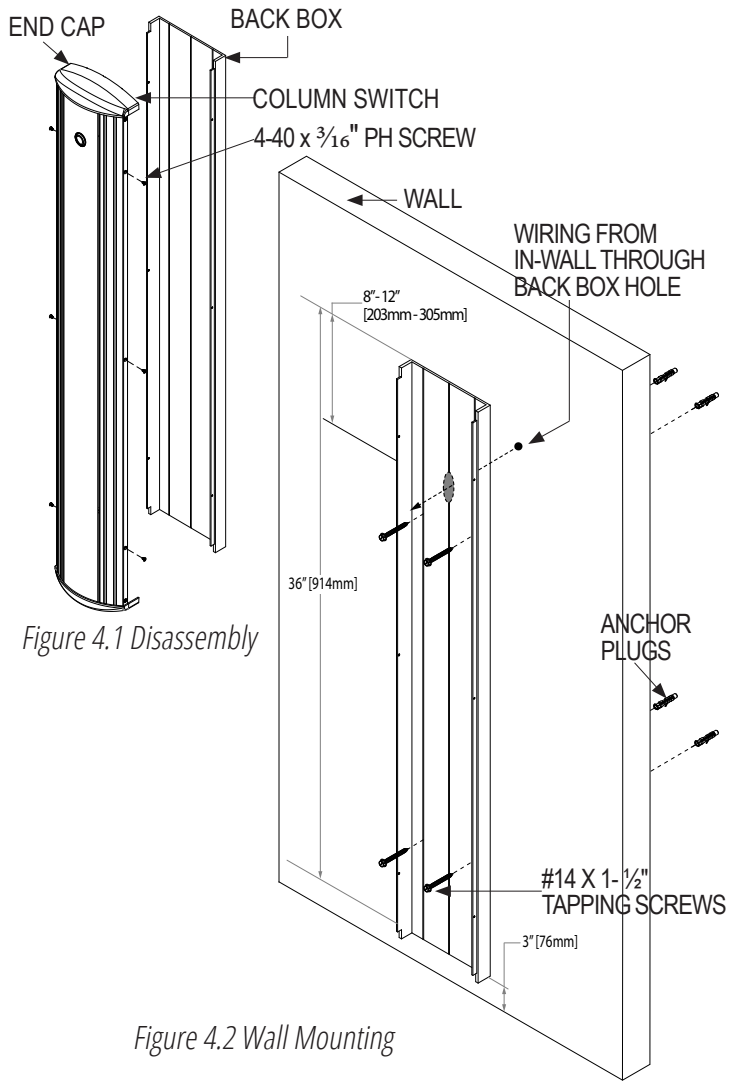


Figure 4.2 Wall Mounting

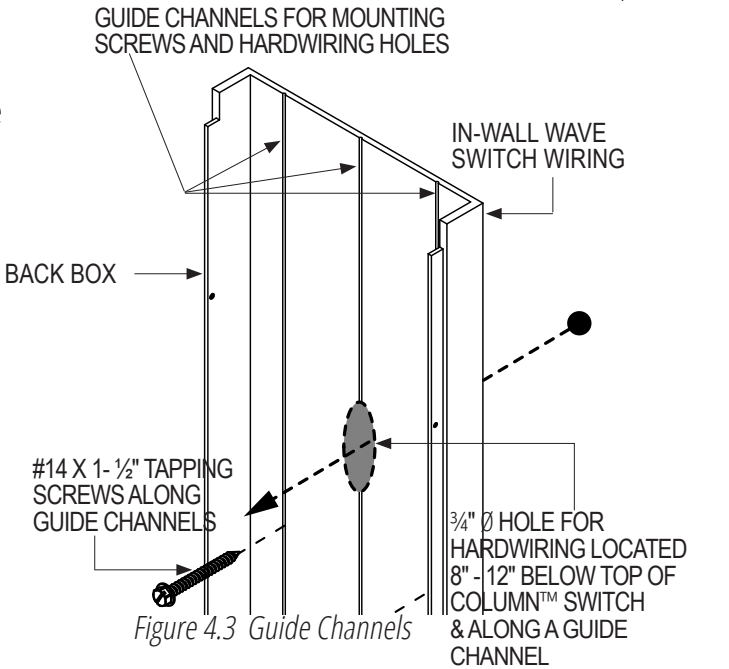


Figure 4.3 Guide Channels

8. Drill the 3/4" Ø hole on the Back Box for the hardwiring connection. (Figure 4.2 and 4.3)

A. Mount the Back Box to the Wall: (Insert Hardwiring)

9. Mark and drill the holes in the wall using a drill bit 7/32" for #14 Tapping Screws or a 3/8" for wall anchors/1/2" for concrete anchors, and insert the anchor plugs provided into the wall.
10. Align the Back Box to the wall mounting screw holes.
11. Insert the wiring connections through the hole.
12. Secure the Back Box to the wall with the #14 x 1-1/2" tapping screws provided. (Figure 4.2 and 4.3)

B. Mount the Back Box to the Frame: (Insert Hardwiring)

9. Drill and tap the screw locations in the Frame using drill bit 13/64" or #7 for 1/4"-20 machine screws.
10. Align the Back Box to the frame mounting screw holes.
11. Insert the wiring connections through the hole.
12. Secure the Back Box to the frame with the 1/4"-20 machine screws. (Figure 4.2 and 4.3)

Connect the Wires from the Wall:

a. If Hardwiring:

13. Connect the two activating wires from the wall/frame, through the Back Box hole, to the lead wires of the Column™ Switch.
14. Use the supplied wire nuts to make your wire connections. Push excess wiring into the back box and ensure wires are not exposed to the moving parts of the switch or pinched between the back of the Column™ Switch base unit and the Back Box.

b. If using Lazerpoint RF:

The cap includes a snap-in compartment for our TX-9 transmitter. Place transmitter in the cap, with the wires hanging down and to the front of the cap. Using the supplied wire nuts, connect the two activating wires to the Column™ Switch lead wires. Slide the battery and the extra wiring into the center (rear) channel provided. Do not slide all of the wire into the channel, so that the cap can hang off to one side while you perform the next step. (Figure 4.5)

Using the supplied wire nuts, connect the two activating wires to the Column™ Switch lead wires. Then, slide the battery and the extra wiring into the center (rear) channel provided. Do not slide all of the wire into the channel, so that the cap can hang off to one side while you perform the next step.

c. If using Kinetic RF:

The CM-8536K uses 2 Kinetic RF switches installed near the top and the bottom of the actuator. When pairing this switch with a Kinetic receiver, you must pair both the top and the bottom

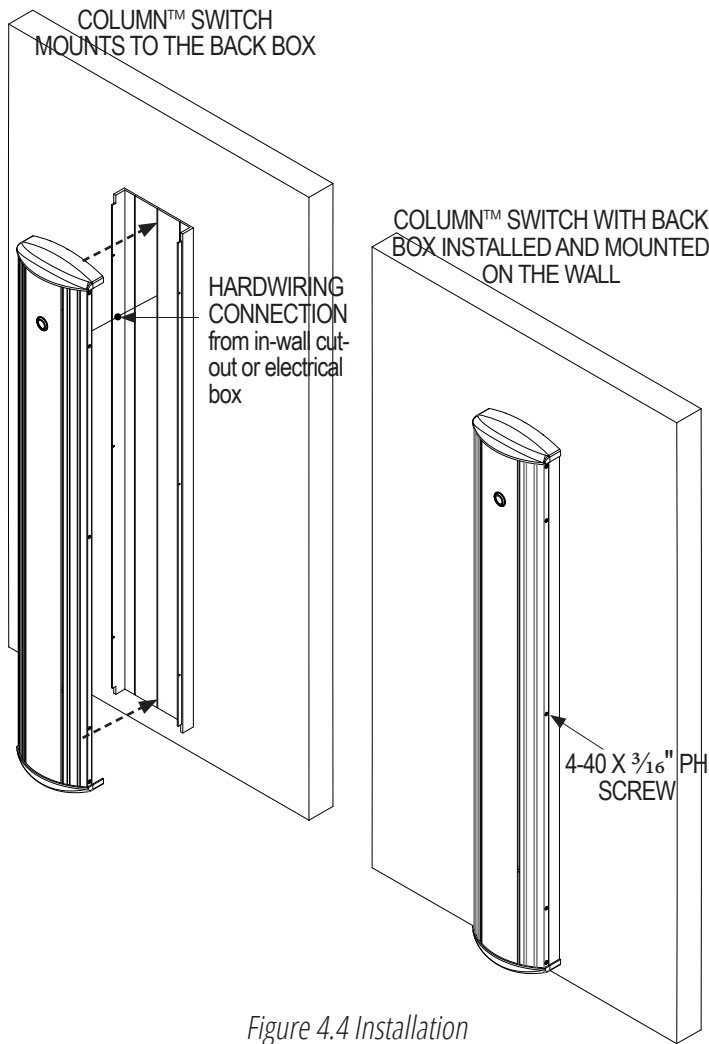


Figure 4.4 Installation

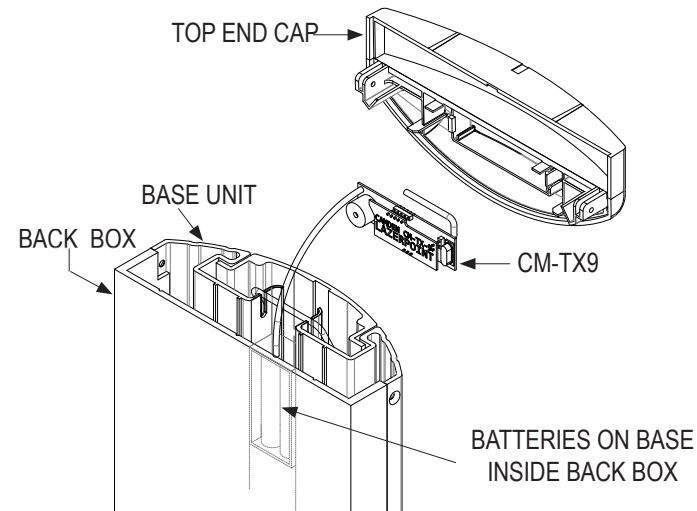


Figure 4.6 Transmitter Assembly

switches. The pairing of Camden Kinetic transmitters is detailed in the CM-RX90v2 installation manual. (Figure 4.5)

d. If using other RF:

Using the supplied wire nuts, make your wire connections to the RF transmitter and tuck the transmitter and excess wire into the Back Box (or wall cavity). Ensure cable is not exposed to the moving parts of the switch, or pinched between the back of the base unit and the surface of the wall.

Attach the Column Switch to the Back Box:

15. Mount the Column™ Switch to the Back Box.
16. Match and insert the Back Box Lips into the Slots between the End Cap Tabs and the End Cap Side Walls. (Figure 3.5)
17. Align the matching screw holes along both sides of the Column™ Switch to the Back Box.
18. Secure the Column™ Switch to the Back Box with the 4-40 x 3/16" Phillips screws provided.

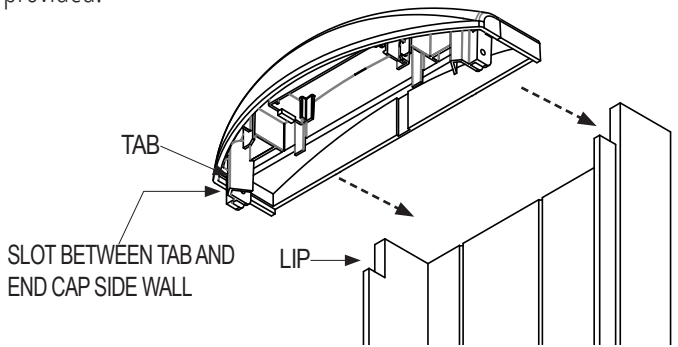
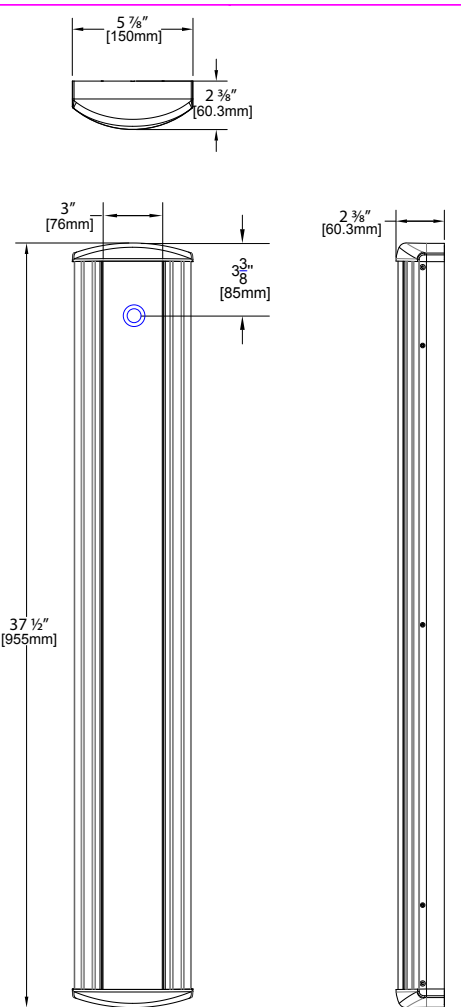


Figure 4.7 End Cap Alignment



5. FCC COMPLIANCE INFORMATION

(If using Kinetic by Camden™)

FCC ID: 2A4GFAGIM5002

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 5 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning

the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Changes or modifications not expressly approved by manufacturer could void the user's authority to operate the equipment.

IC: 1105A-AFIM5002

This device complies with Industry Canada license-exempt RSS standards. Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

6. CX-ED2079 ‘UNIVERSAL’ ELECTRIC STRIKE INSTALLATION

1. Firstly, verify that voltage required to operate Electric strike is compatible with supply voltage of the installation.
POWER: Red/Black, Blue/Green (12 VDC)
Red, Black/Blue, Green (24 VDC)
Red/Green (Sort Black, Blue)
2. Splice the strike wire with the supplied wire and make sure to attach provided varistor as described in connection section.

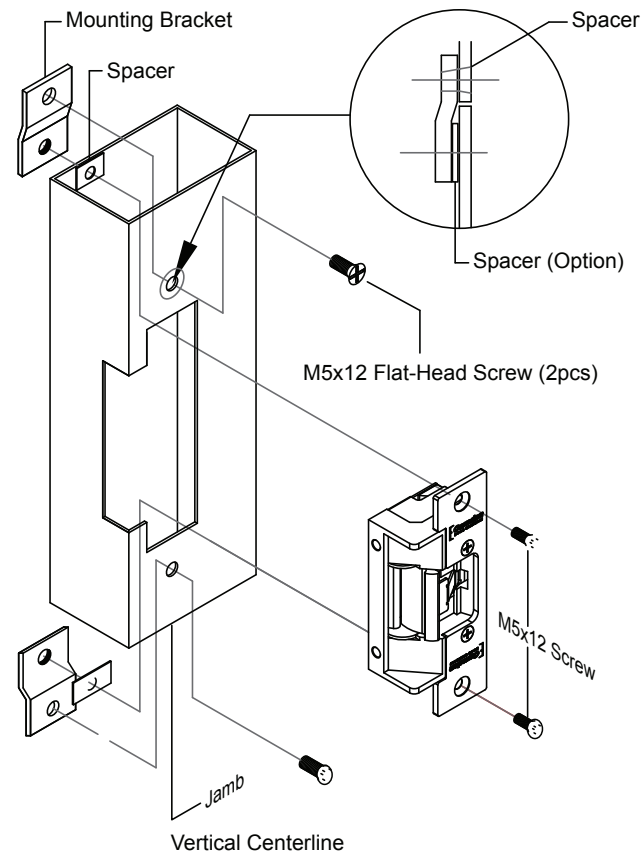


Figure 7.1 CX-ED2079 Strike Mounting

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.

3. Make sure that the door jamb has an appropriate cutout to accommodate strike assembly. (Make sure to leave enough room for splicing between power supply and electric strike wiring.)
4. For a wooden door jamb, drill holes to install the strike and finally use supplied #12 x 1/2" machine screws to secure the strike.

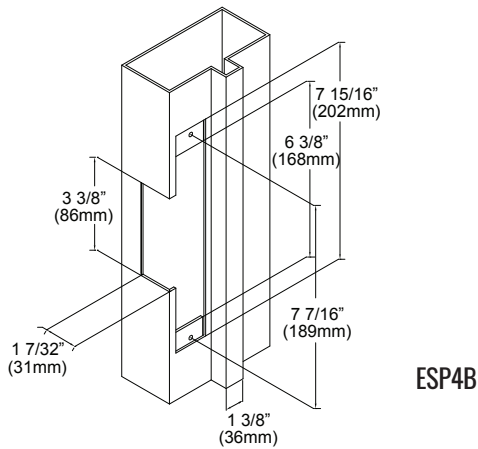
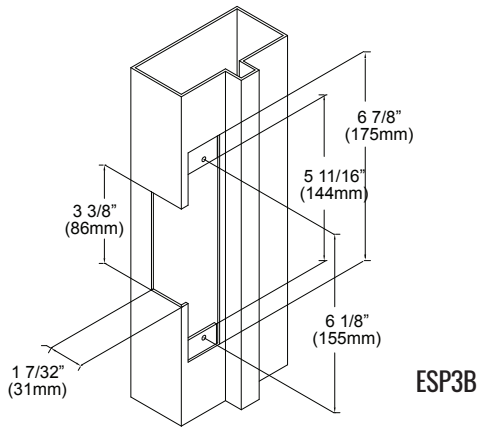
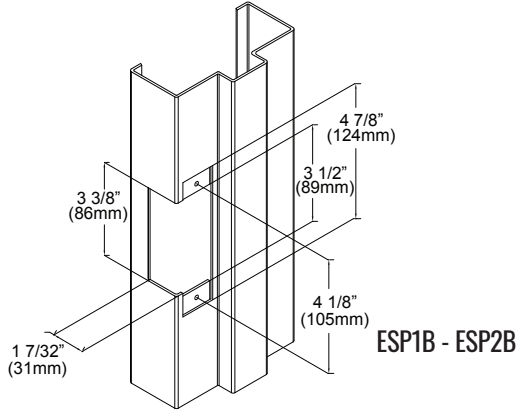


Figure 7.2 Mounting Options for CX-ED2079

7. CX-ED2079 CONNECTIONS

A Varistor is provided to protect strikes from large volume spike. Connect varistor between the two input wires. Connection of the varistor varies based on input voltage. Please refer following table for more details:

Power	Varistor Connection	
	+ve end	-ve end
12V	Red/Black	Blue/Green
24V	Red	Green

Note:

For UL 294 and UL 1034 compliance, the door strikes are to be powered via a UL 294 or UL 603 class 2 power limited output from a control panel and/or power supply. In addition, when powered by AC or DC, the units must have a UL-regulated UL 294 or UL 603 power limited class 2 output rated at 12 or 24 volts, as well as an AC on indicator.

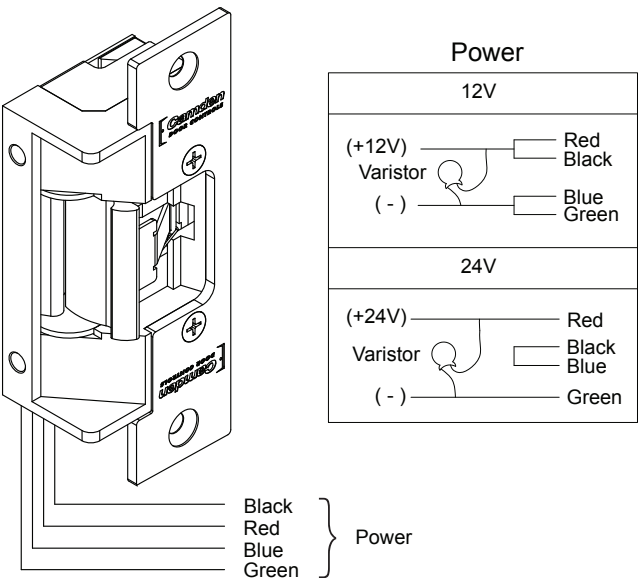


Figure 8.1 Connections for CX-ED2079

8. CX-ED2079 OPERATIONS

How to change from fail-safe to fail-secure and vice versa:

- Loosen the screw as per the product diagram below.
- Rotate the set plate 180° and slide the plate until it is properly seated.
- Tighten the screw.

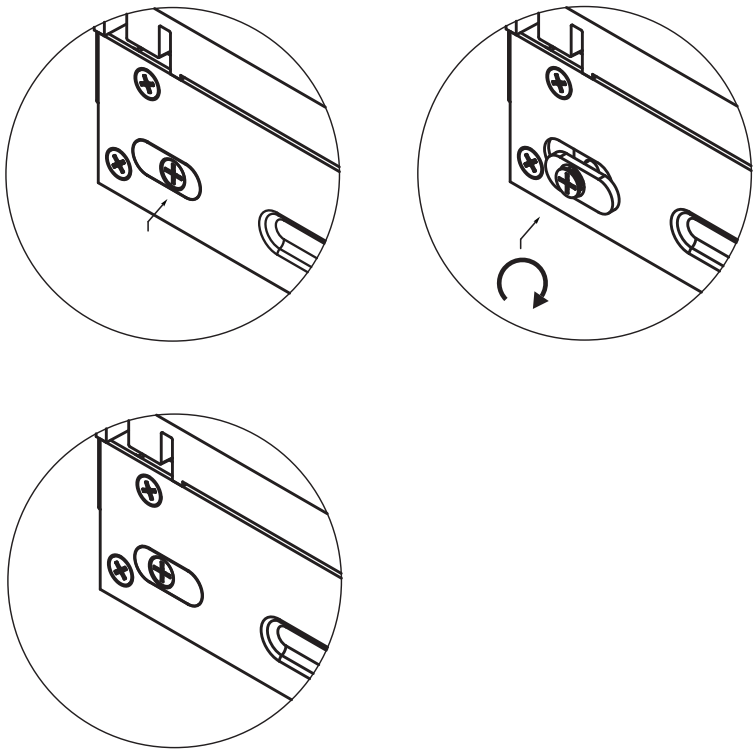


Figure 9.1 Fail Safe and Fail Secure Mechanism for CX-ED2079

9. ORDERING INFORMATION FOR PART REPLACEMENT

PART NUMBER	DESCRIPTION
60-40E036	WC17SL-PS Multifunction Relays In Pre-Wired Metal Cabinet
CX-MDA	Magnetic Door Contact
CX-ED2079	Grade 2 Universal Electric Strike
CM-8536/4-LED	36" Column "Push To Open" Switch
CM-8536/8B-LED	36" Column "Push To Lock" Switch
CM-8536/4	36" Column "Push To Open" Switch

Notes :

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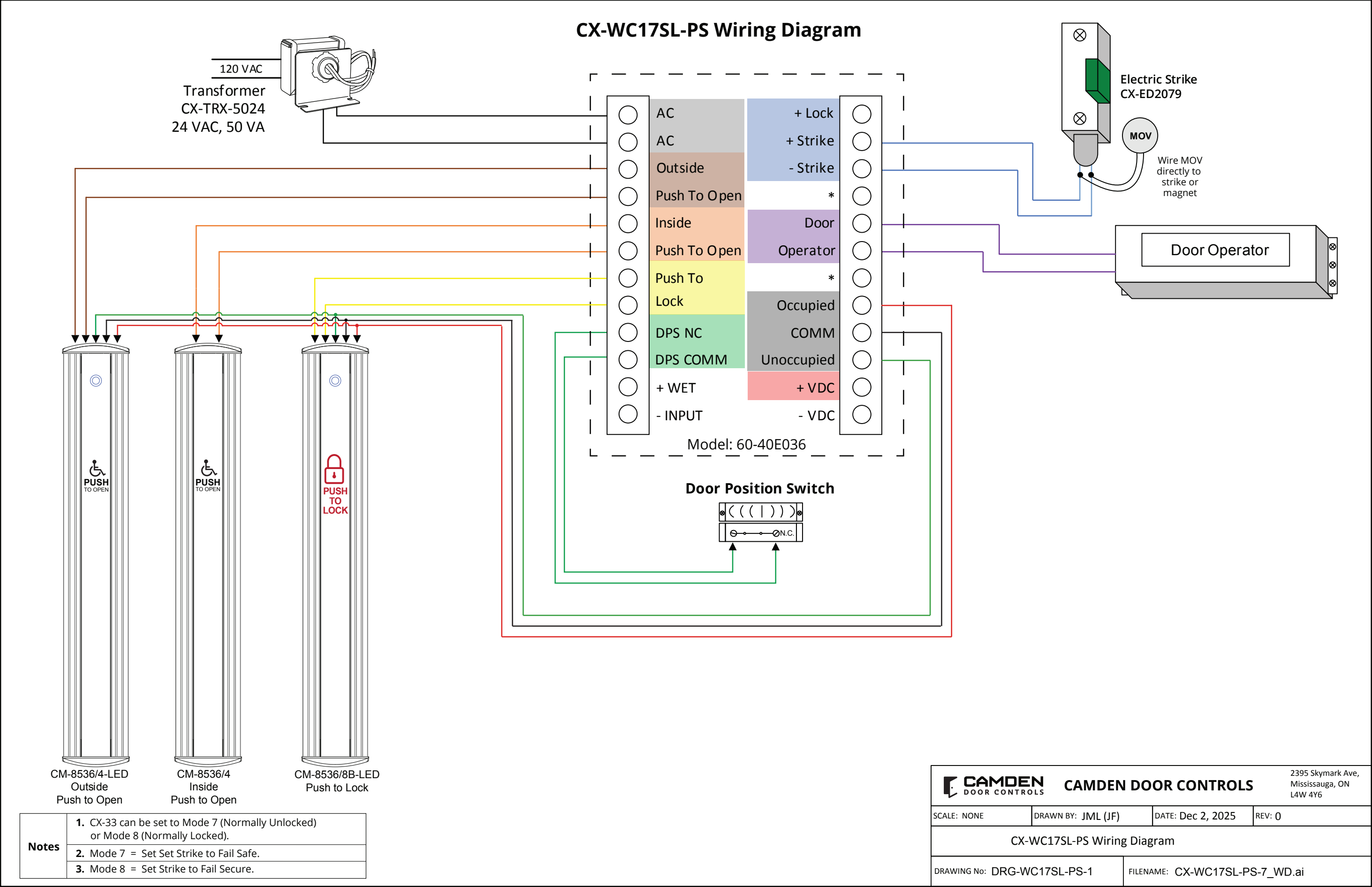
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Questions? Call us toll-free at 1-877-226-3369 or technical support 905-366-3377 (ext. 505)



CX-WC17SL-PS Wiring Diagram with CX-WEC10-K2 Integration

