

CX-WC18SLVR-PS Series
Restroom Kit
INSTALLATION INSTRUCTIONS



THIS PACKAGE INCLUDES:

Column Switches:	1 - 4 PIN Power Connector	1 - Pre-wired CX-33 Relay
3 - CM-8436VR Column™ Switches	1 - ESP1B, ESP3B and ESP4B Faceplates	1 - Power Supply
3 - CM-8436 Back Boxes	4 - Wire Nuts	1 - Hardware Kit
12 - #14 x 1-1/2" Tapping Screws	5 - M5 x 12mm Screws	1 - Transformer
12 - Anchors	2 - #10 x 1-1/4" Wood Screws	1 - Surface Mounting Contact
12 - Concrete Anchors	2 - #10-32 x 1/2" Screws	1 - "Occupied When Red" Sign
12 - 1/4"-20 Machine Screws	2 - Mounting Brackets	1 - "Locked When Red" Sign
6 - Wire Nuts	2 - Spacers	4 - Foam Tape
3 - Jumpers	1 - Varistor	
Electric Strike:	CX-33PS Logic Relay:	
1 - CX-ED2079 Electric Strike	1 - Metal Cabinet	

1. GENERAL DESCRIPTION

The Camden CX-WC18SLVR-PS Restroom Control Kit comes with the built-in CM-221 Hands-Free Switch, which uses active infrared sensor technology and is designed to be used in ADA-compliant automatic door control applications and access control. The CM-221 switch eliminates the spread of germs by avoiding physical contact and provides greater convenience when moving through the premises. For smooth operation, the CM-221 has an adjustable time delay of 0.5 to 20 seconds and an adjustable range of 2" to 8" (5cm to 20cm).

The CX-WC18SLVR-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.

The CM-8436VR Column™ Switches included in the Kit have Back Boxes which facilitate mounting to narrow frames, and provide easier maintenance/service.

Operation at a Glance

The CX-WC18SLVR-PS has two modes: Mode 7 and Mode 8. Mode 7 refers to the "Normally Unlocked" condition, when the exterior PUSH to OPEN Column™ Switch is pressed or waved, it triggers the door operator to open the door. Mode 8 refers to a "Normally Locked" condition, where entry to the restroom is accomplished by a Keyswitch, Keypad, Prox Reader, or other secure means. The exterior PUSH TO OPEN Column™ Switch is still utilized, but in this mode it is to be wired in series with the limited access device mentioned above.

Inside the restroom once the door closes, if the PUSH to LOCK Column™ Switch is pressed or waved, it keeps the door locked and disables the exterior PUSH to OPEN Column™ Switch. The LED light ring on the Column™ Switch turns red, indicating the restroom is occupied. The user can either press or wave the PUSH to UNLOCK Column™ Switch as they exit the restroom. The LED light ring on the Column™ Switch turns green, indicating the restroom is now available to be used.

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-8436VR	Model	CX-ED2079
Voltage	12 to 24 VDC +/- 10%	Voltage	12/24V AC/DC
Current	45 mA (peak)	Current Draw	300mA@12V, 150mA@24V DC
Contact Rating	1 Amp @ 30 VDC	Static Strength	1,000 Lbs.
Contacts	Common/ N.O./ N.C.	Dynamic Strength	50 Ft-Lbs.
Temperature Range	-13°F to 122°F (-25 °C to 50 °C)	Endurance	700,000 Cycles (Factory Tested) 500,000 Cycles (UL Verified)
Response Time	10ms	Mode	Field Selectable, Fail Safe/Fail Secure
Construction	Heavy duty extruded aluminum	Mech. Adjustment	Strike Body/Faceplate
Finish	Anodized clear, black, blue, dark bronze	Operation	AC-Buzz, DC-Silent
Mounting	4 x #14 x 1-1/2" Tapping Screws with anchors or 1/4"-20 Machine Screws	Duty	Continuous
Actuator Width	3" (76mm)	Dimensions	3-3/8" H x 1-7/8" W x 1-7/32" D (86mm x 47mm x 31mm)
Dimensions (Overall)	37-1/2" H x 4-5/8"W x 2-9/16"D (955mm x 118mm x 65mm)	Approvals	UL Listing #BP10200 for UL 1034 & UL 294 BHMA Certified ANSI A156.31
Model	WC-18SLVR-PS Relay Cabinet (CX-33PS)	3. CX-33PS MOUNTING, WIRING & MODE SELECTION	
Voltage	AC Input: 12V to 28V; DC Output: 12 or 24V	IMPORTANT: Do not apply power to the unit until you have fully read instructions and have made the required adjustments.	
Current Supply	2 Amps	The CX-WC18SLVR-PS Restroom Control Kit includes the CX-33PS Advanced Logic Relay. A complete wiring diagram is included in this manual.	
Battery Backup	Gel Type (not supplied)	Mounting	
LED Indicator	AC Input and DC Output	The CX-WC18SLVR-PS cabinet should be mounted in a clean dry location out of direct contact with the elements.	
Temperature	Operating: 0° C to 49° C (32° F to 120° F) Storage: - 20° C to 70° C (- 4° F to 158° F)	Wiring	
Inputs	(4) Dry, (1) Wet 5V to 120V AC/DC, Non-Polarity Optically Isolated	The CX-WC18SLVR-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.	
Outputs	(3) Form 'C' (SPDT), 3 Amps @ 24V DC	There are two terminal strips that mirror the locations on the CX-33PS. 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.	
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)		

Once all field device are wired to the CX-WC18SLVR-PS then AC power can be wired in.

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.

Note: The default mode for the CX-WC18SLVR-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-WC18SLVR-PS, 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 Table 3.1)

Factory Reset (Defaulting the CX-33PS)

To return the CX-33PS back to its factory default settings, you must remove the power, then hold down the MENU button while powering up the CX-33PS. 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-WC18SLVR-PS.

Table 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-8436VR COLUMN™ SWITCH INSTALLATION

Code Requirements: If installed according to these instructions the CM-8436VR 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-8436VR complies with the National Building Code of Canada reference to CSA Regulation 5.2.9.3 (c) ii.

The CM-8436VR Hands-Free 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-8436VR Hands-Free Column™ Switch at any time.

Disassemble the Back Box:

1. Unpack the pre-assembled CM-8436VR 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 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.
8. Drill the 3/4" Ø hole on the Back Box for the hardwiring connection. (Figure 4.2 and 4.3)

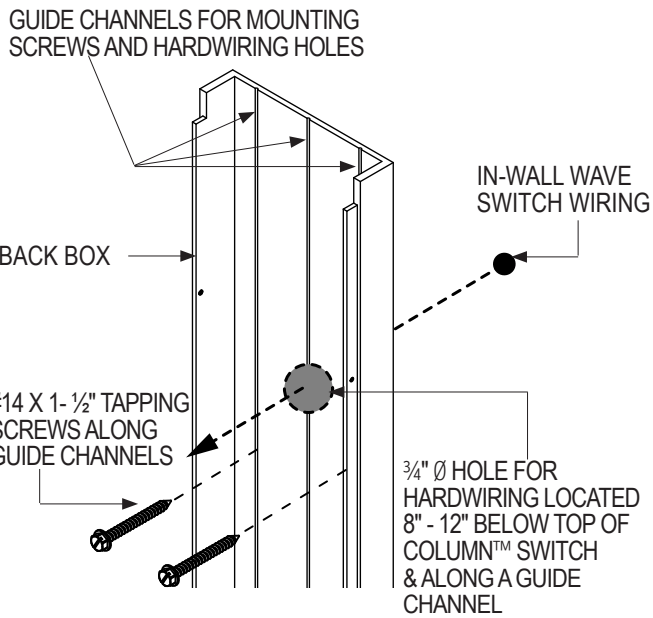
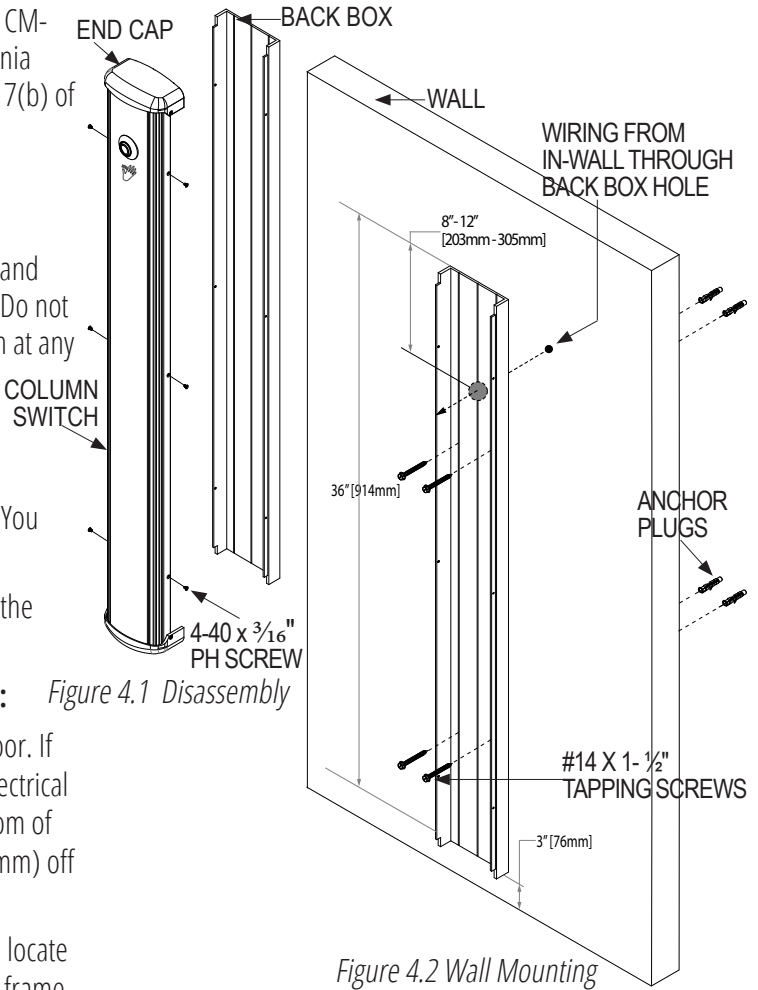


Figure 4.3 Guide Channels

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: (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.

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 4.5)
- 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.

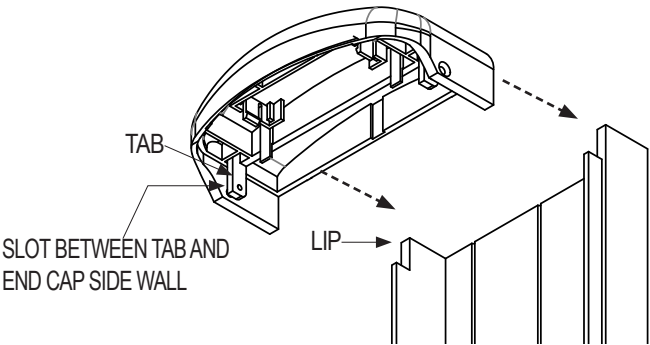


Figure 4.5 End Cap Alignment

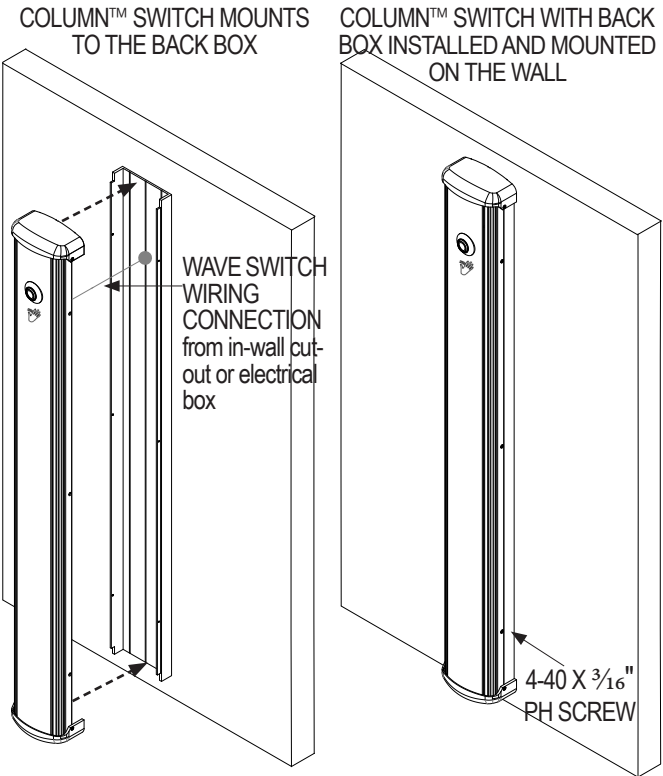


Figure 4.4 Installation

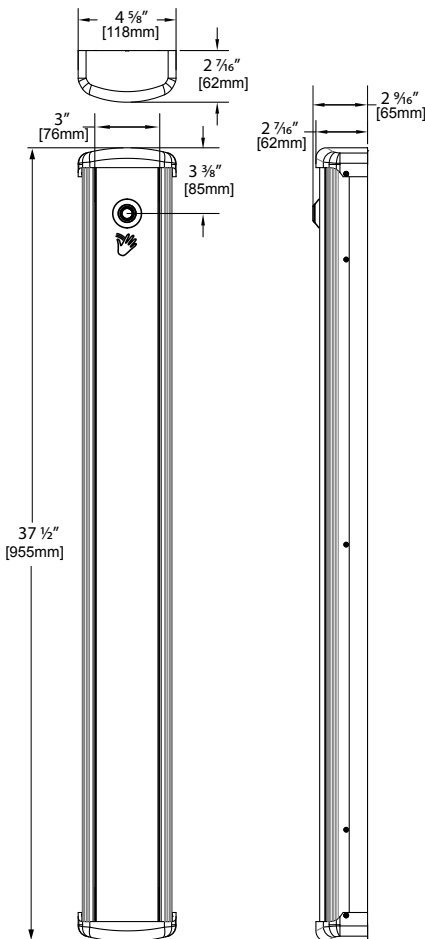


Figure 4.6 Dimensions

5. CONFIGURING THE CM-8436VR

Range of Detection and Output Duration (Figure 5.1)

Looking at the back of the CM-8436VR with the Mode pins located at the top, you will see two adjustment potentiometers. The one on the left can be turned clockwise to set the range of detection (2" to 8" / 5cm to 20cm), and the one on the right will set the duration of the output (Approximately 1 second maximum for restroom control).

Remote LED Switching

The CM-8436VR can also have its LED states controlled remotely. This is done by installing the supplied jumper from the parts bag

onto the two pins on the back of the unit. Once installed the green and red LED's can be triggered to change by bringing either one low (to ground). The green wire controls the green LED, whereas, the red wire controls the red LED. They can be individually turned on or off, or they can be wired to a SPDT contact to turn red on and green off, or vice versa.

Note: Refer to the complete wiring diagrams included in this Instructions Manual.

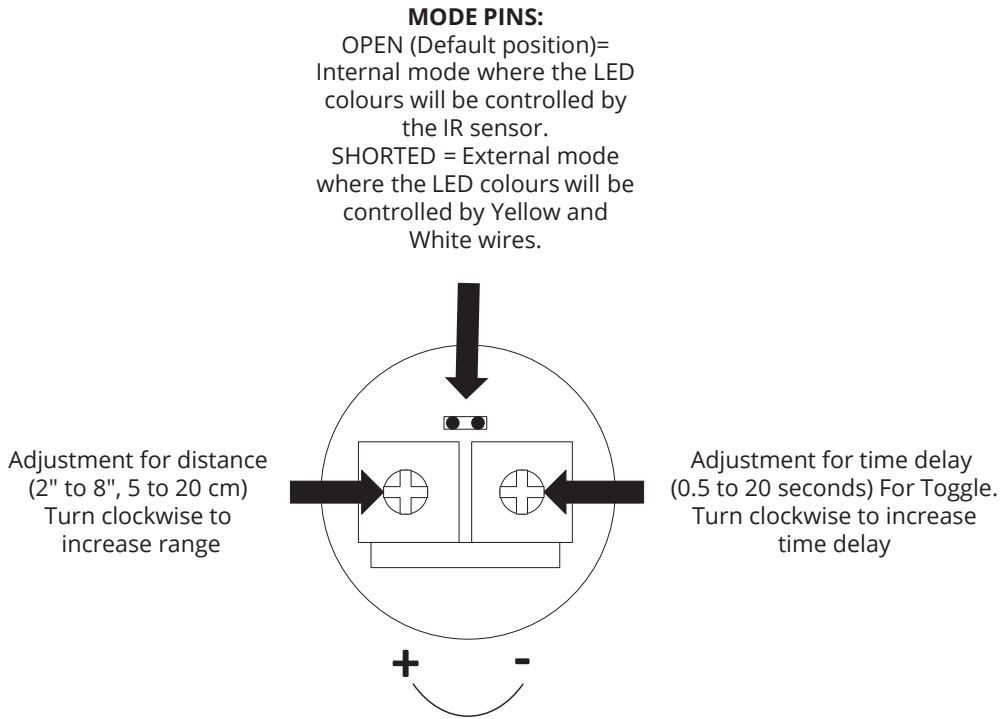


Figure 5.1 Configuration

6. CM-221 to CX-33PS CONNECTIONS

IMPORTANT:

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

The CX-WC18SLVR-PS Restroom Control Kit comes with the CX-33PS Advanced Logic Relay, Power Supply and Cabinet, which has a set of two terminal strips. The terminal strips are pre-wired with clear labels, and a complete wiring diagram is displayed inside the door and included in the later sections of this manual to provide a wiring layout reference when connecting field devices to the kit.

The left-side terminal strip is used to power CX-33PS, the PUSH

to OPEN (both exterior and interior) Column™ Switches, PUSH to LOCK Column™ Switch, the door position switch, and the wet trigger. The right switch of the terminal is used to power the outputs to drive the strike (Relay 1), door operator (Relay 2), LED light (Relay 3), and provide VDC power for the door strike. A complete wiring diagram is included in this manual.

IMPORTANT: 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.

7. 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.
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.

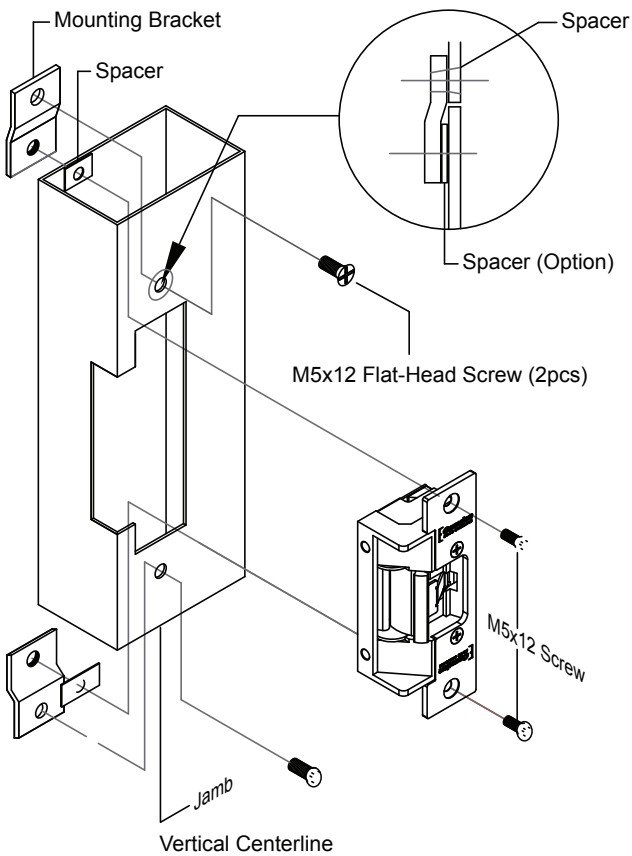


Figure 7.1 CX-ED2079 Strike Mounting

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.

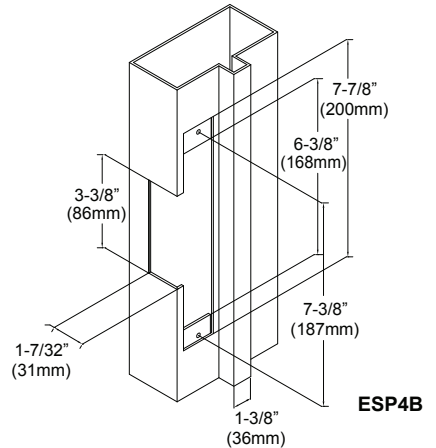
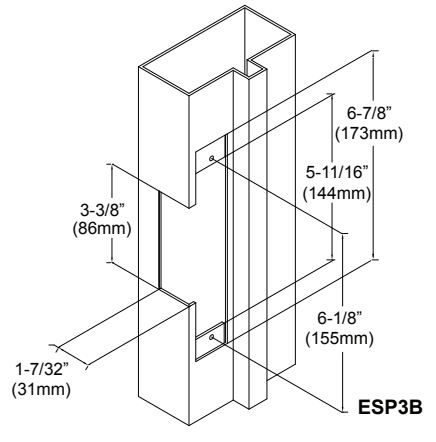
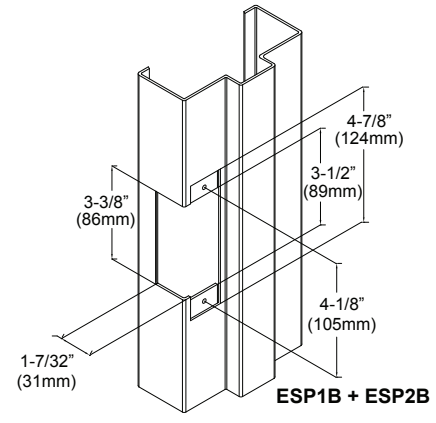


Figure 7.2 Mounting options for CX-ED2079

8. 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.

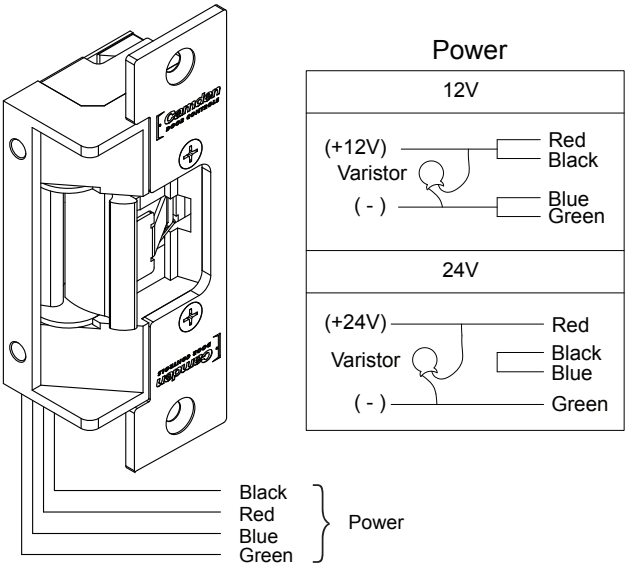


Figure 8.1 Connections for CX-ED2079

9. CX-ED2079 OPERATION

How to change from fail-safe to fail-secure and vice versa: (Figure 8.1)

- 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.

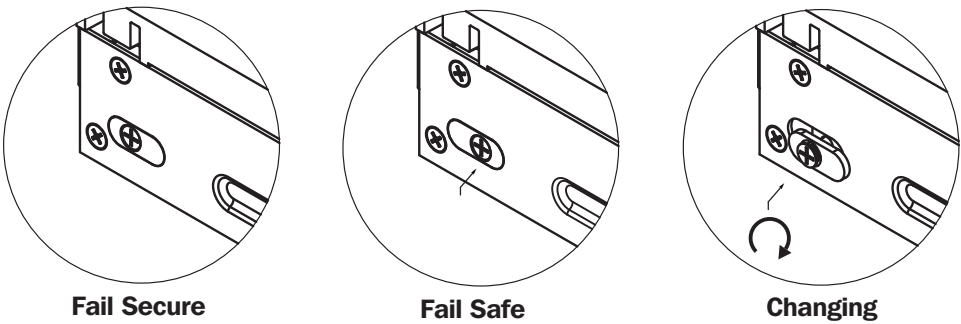


Figure 9.1 Fail Safe and Fail Secure Mechanism for CX-ED2079

10. ORDERING INFORMATION FOR PART REPLACEMENT

PART NUMBER	DESCRIPTION
60-31A083	Touchless Sensor Switch With External Led Control
60-40E036VR-1	WC18VR-PS Metal Cabinet for Multifunction Relays
CX-MDA	Magnetic Door Contact
CX-ED2079	Grade 2 Universal Electric Strike
CM-8436VR/4	36" Column "Push To Open" Switch
CM-8436VR/8B	36" Column "Push To Lock" Switch

Notes :

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



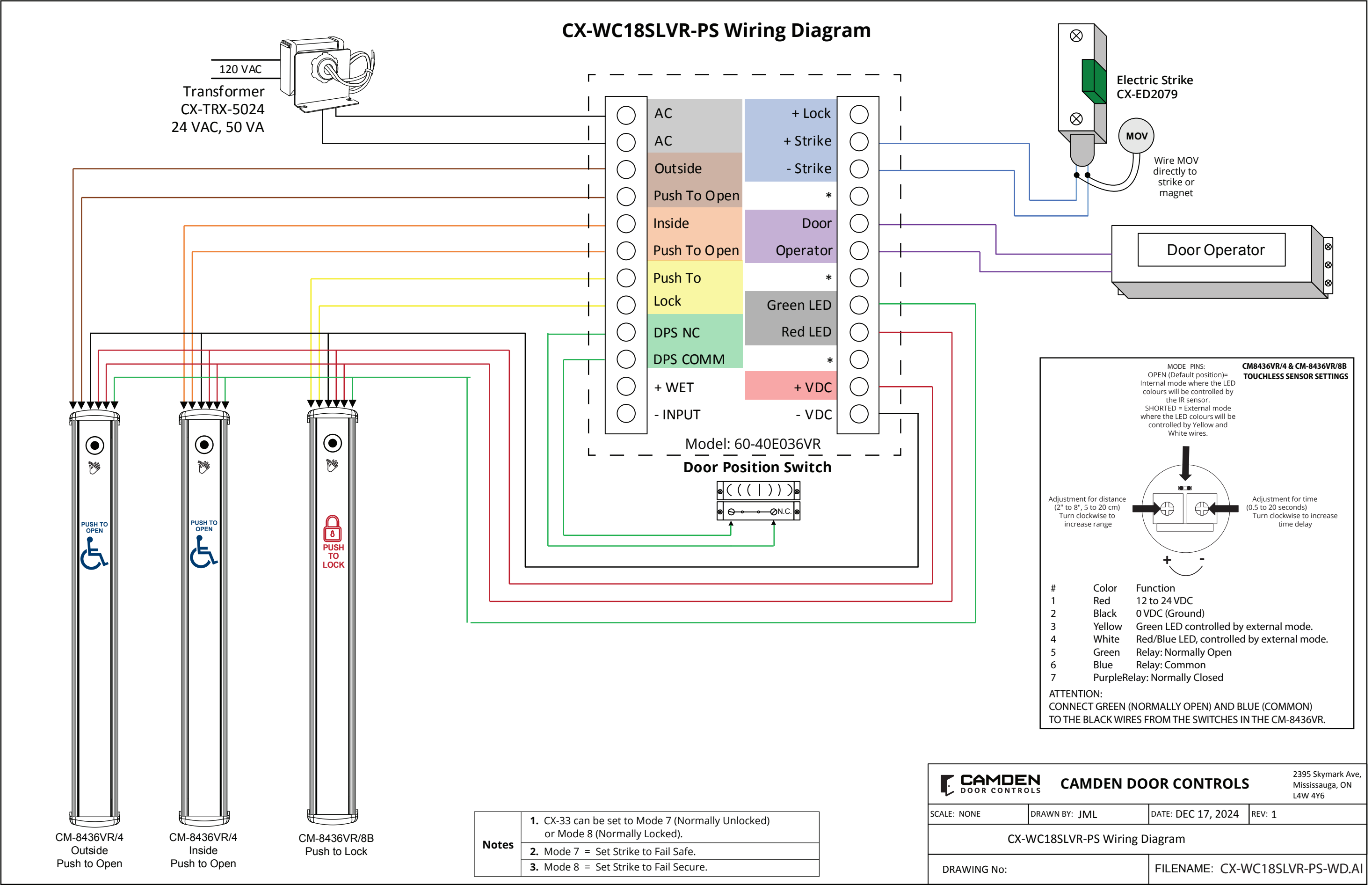
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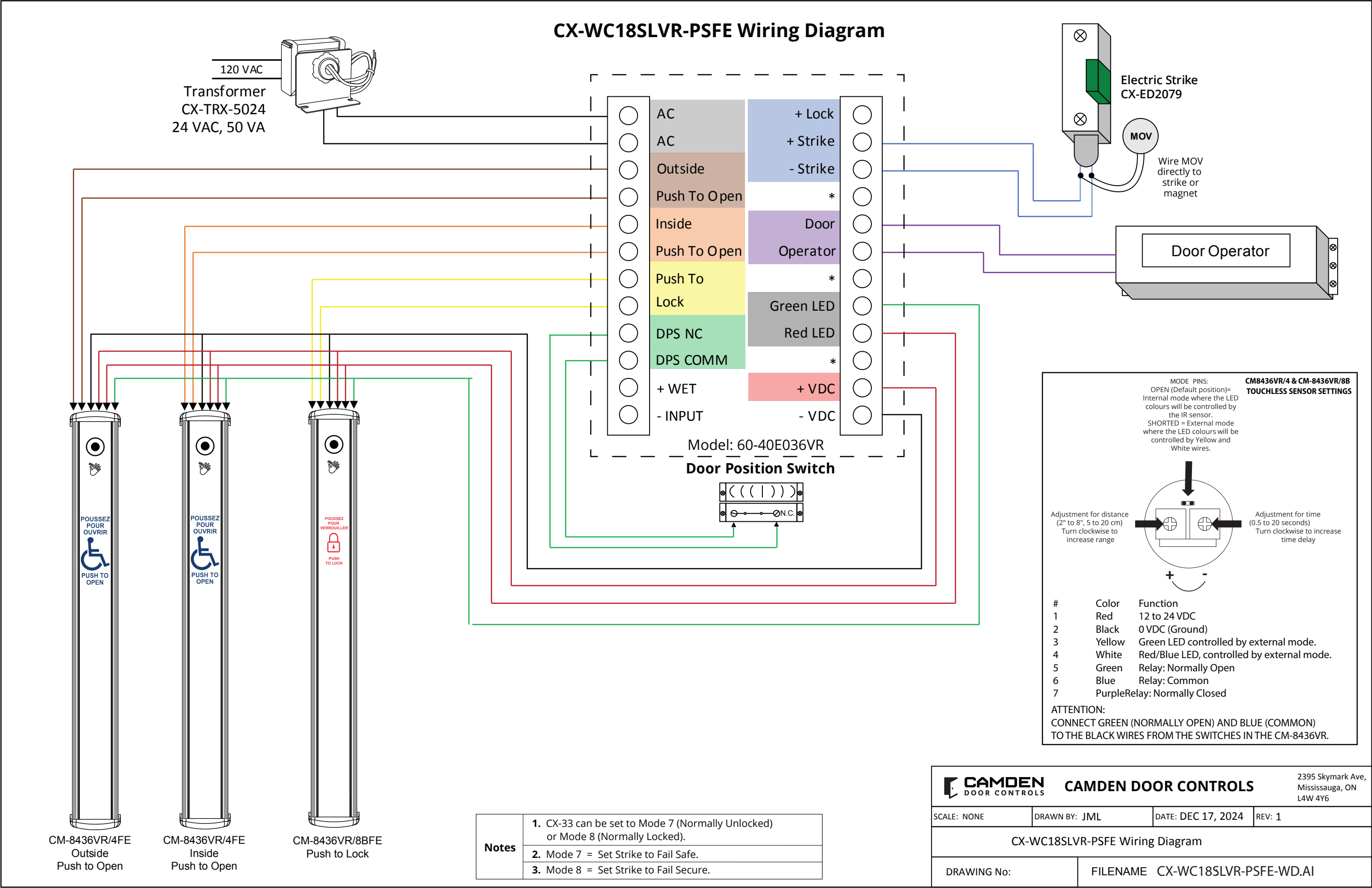
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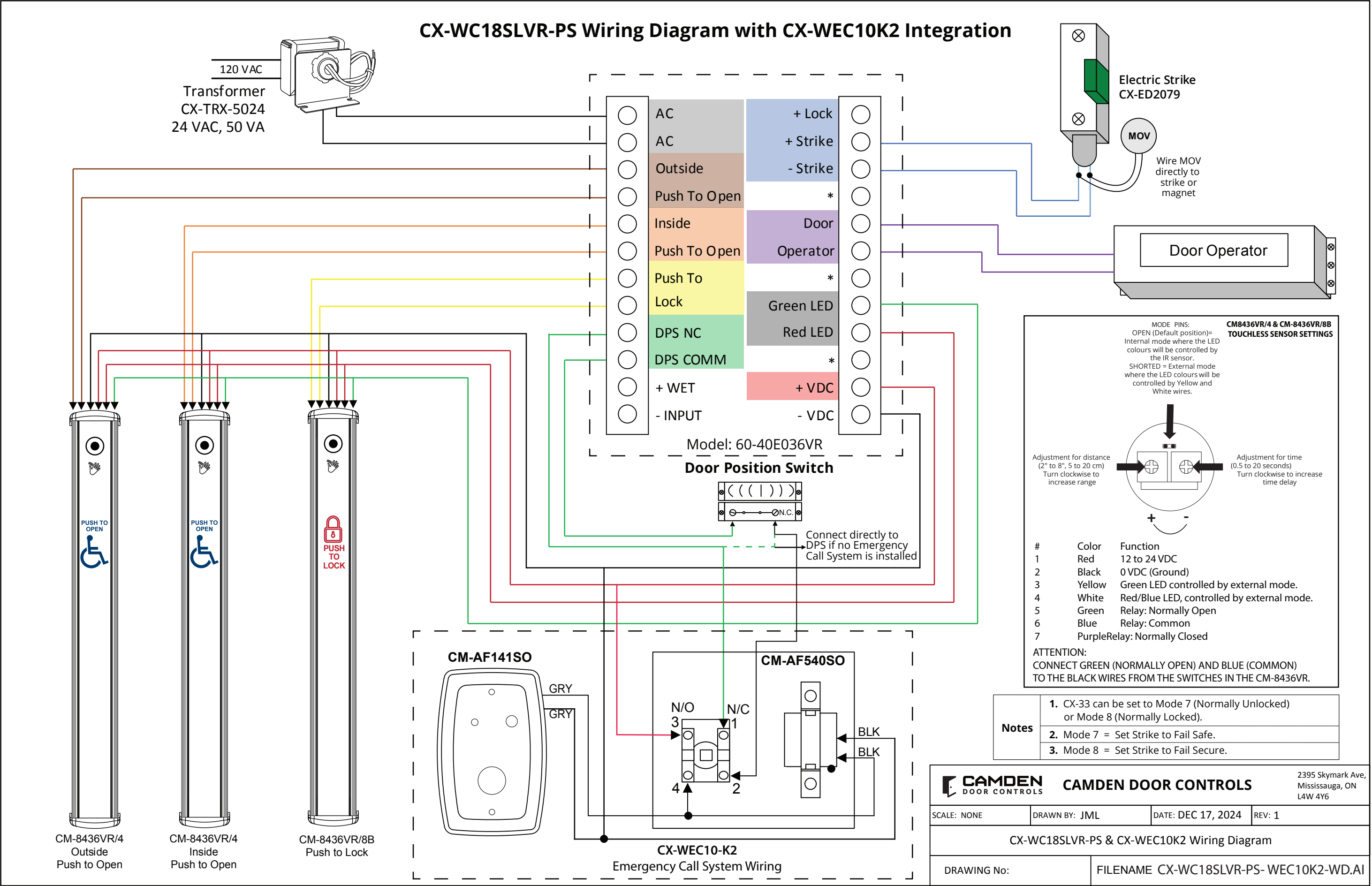


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Control_Manual_R2.indd
Revision: August 24, 2026
Part No.: 40-82B372

CX-WC18SLVR-PS Wiring Diagram







CX-WC18SLVR-PS Wiring Diagram with CX-WEC10K2 Integration
(With additional contact block for Mode 8 - Fail Secure/Normally Locked setting)

