

CX-WC18SLVR Series
Restroom Kit
INSTALLATION INSTRUCTIONS



THIS PACKAGE INCLUDES:

- Column™ Switches:**

 - 3 - CM-8436VR Column™ Switch
 - 3 - CM-8436 Back Boxes
 - 12 - #14 x 1-1/2" Tapping Screws
 - 12 - Anchors
 - 12 - Concrete Anchors
 - 12 - 1/4"-20 Machine Screws
 - 6 - Wire Nuts
 - 3 - Jumpers
- CX-33 Logic Relay:**

 - 1 - CX-33 Relay
 - 1 - 1-1/2" x 1-1/2" Velcro
 - 1 - Resistor
 - 1 - Surface Mounting Contact
 - 1 - "Occupied When Red" Sign
 - 1 - "Locked When Red" Sign
 - 4 - Foam Tape

1. GENERAL DESCRIPTION

The all-new Camden CX-WC18SLVR Restroom Control Kit now 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 Restroom Control Kit is controlled by Camden's CX-33 advanced relay logic controller (designed to support virtually any automatic door application).

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 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 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
Voltage	12 to 24 VDC +/- 10%
Current	45 mA (peak)
Contact Rating	1 Amp @ 30 VDC
Contacts	Common/ N.O./ N.C.
Temperature Range	-13°F to 122°F (-25 °C to 50 °C)
Response Time	10ms
Construction	Heavy duty extruded aluminum
Finish	Anodized clear, black, blue, dark bronze
Mounting	4 x #14 x 1-1/2" Tapping Screws with anchor or 1/4"-20 Machine Screws
Actuator Width	3" (76mm)
Dimensions (Overall)	37-1/2" H x 4-5/8"W x 2-9/16"D (955mm x 118mm x 65mm)

Model	CX-33
Operating Voltage	12/24 Volts, AC/DC
Current Draw	105 mA standby, 320 mA max.
Operating Temperature	Operating: - 30° C to 85° C (-22° F to 185° F)
Display	Blue multi-segment LED
Programming	MENU, UP & DOWN buttons
Inputs	(4) Dry, (1) Wet 4.5V to 120V AC/DC, Non-Polarity Optically Isolated, non-polarity sensitive)
Response Time	0.5 seconds
Relay Output	3 x Form 'C' (SPDT)
Relay Contact Rating	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	2" H x 6" W x 7/8" D (51mm x 152mm x 22mm)

3. CX-33 MOUNTING, WIRING & MODE SETTING

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

The CX-WC18VR Restroom Control Kit includes the CX-33 Advanced Logic Relay. A complete wiring diagram is included in this manual.

Mounting

The CX-33 should be mounted in a clean dry location out of direct contact with the elements. Ideal locations include inside a metal enclosure, operator header, or above a false ceiling. The Display & LEDs are visible through the clear plastic case, and cut-outs for programming buttons and terminal strips. Once wired and adjusted, the unit can be tucked into the operator header or secured using the supplied velcro or screws.

Wiring

Refer to the complete wiring diagrams on pages 9 to 12 of this manual.

There are two terminal strips on the CX-33. The left strip is used for power to the CX-33, the PUSH TO OPEN and PUSH TO LOCK column switches, 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), LED illumination (Relay3), and to provide VDC power for the door strike.

Once all field devices are wired to the CX-WC18VR 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.

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 is Mode 7 (normally unlocked).

There are three LED displays on the CX-33 that will allow you to see what mode you have selected when advancing through the modes. To change the mode of the CX-WC18SLVR, 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 on the CX-33. 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 on the following page.

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-WC18SLVR.

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 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. (Figure 4.2)

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:

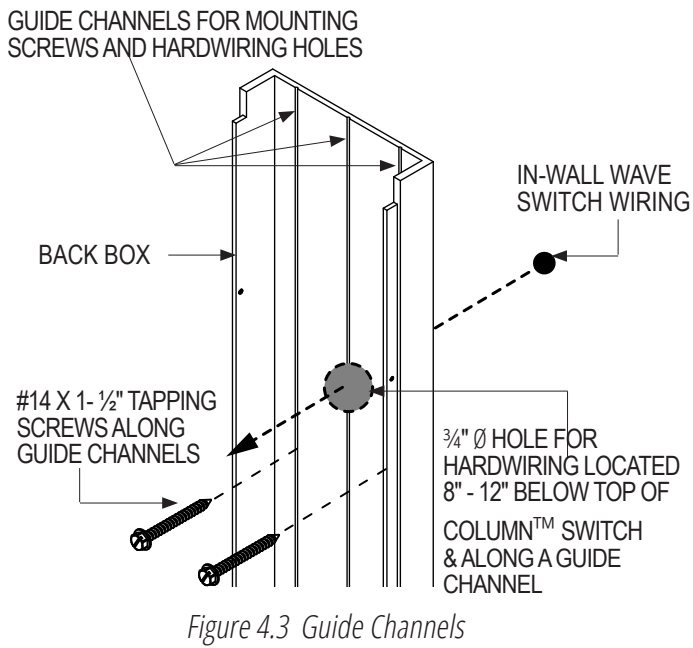
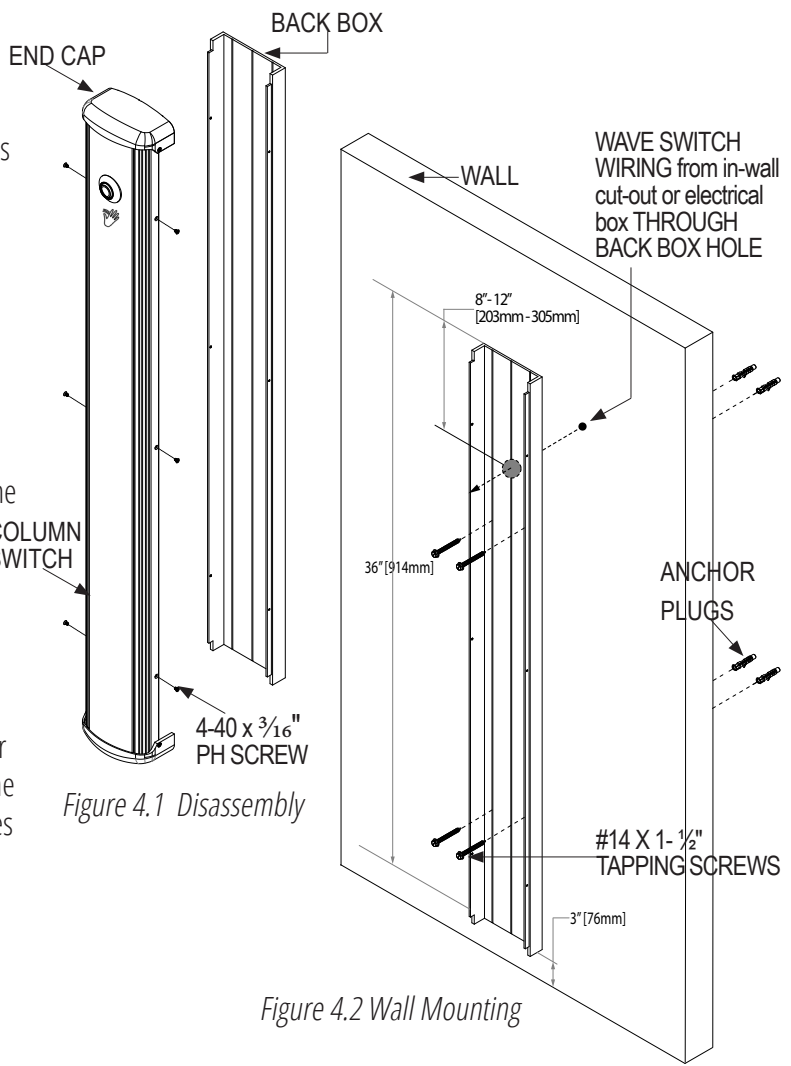
7. Locate and mark a through hole near the Column™ Switch wires in the Back Box for the hardwiring connection from the wall to the Column™ Switch wires. We recommend drilling a 3/4" Ø hole along the Guide Channels at the upper end of the Back Box between 8" and 12" from the top of the Column™ Switch. 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)

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 a 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, 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 4.4)
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.

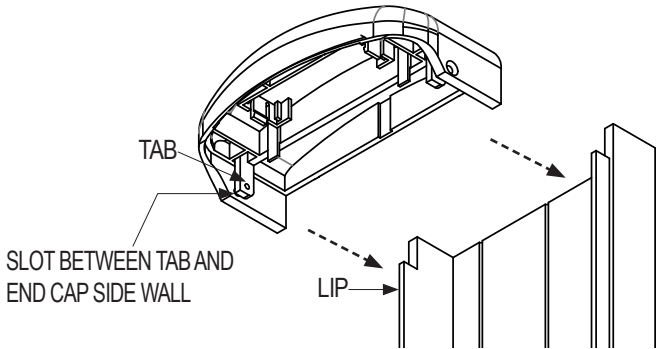


Figure 4.4 End Cap Alignment

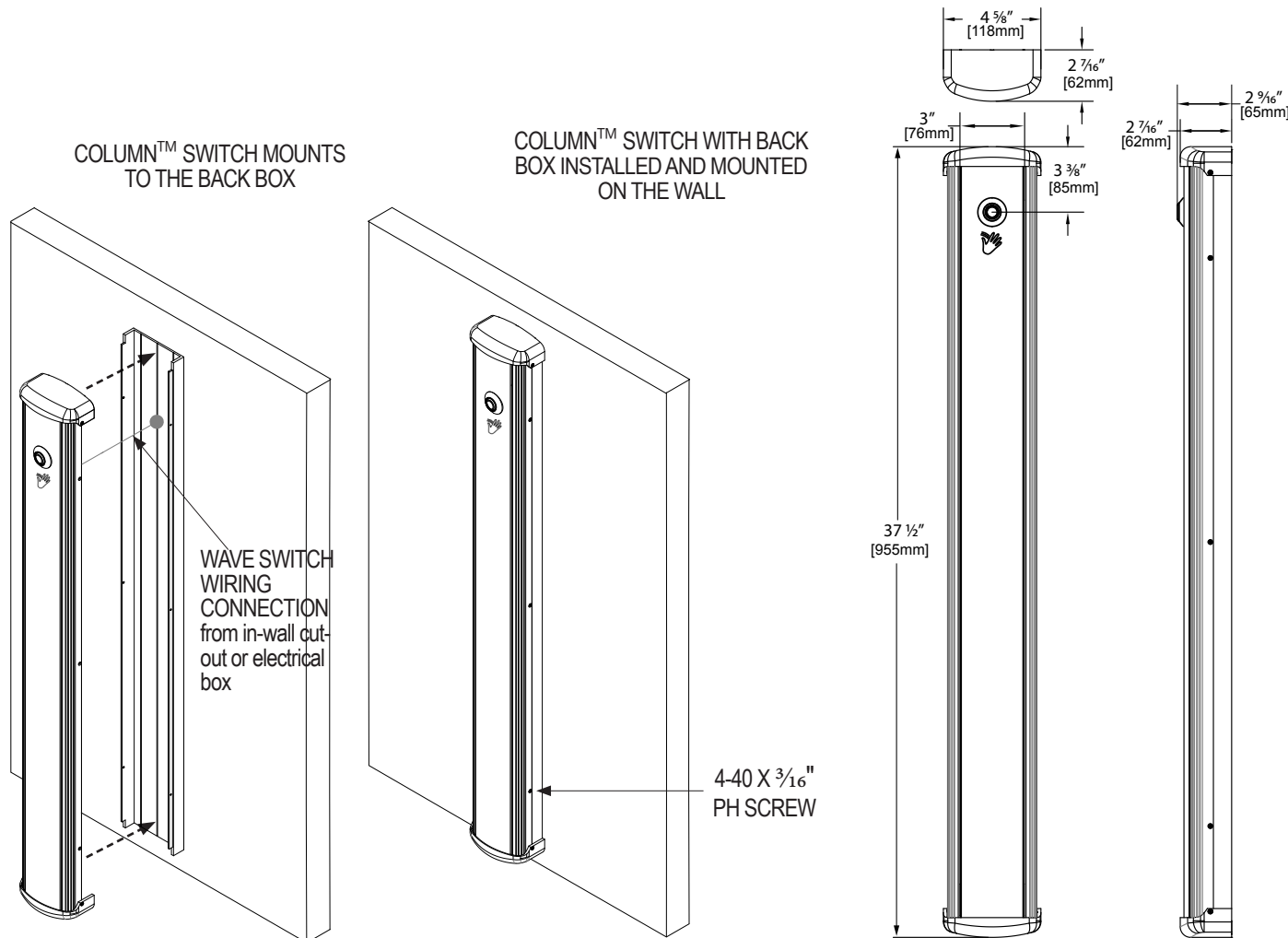


Figure 4.5 Installation

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 (0.5 to 20 seconds).

If the output needs to be triggered and maintained in that state until triggered once more, then the Toggle feature can be used by turning the output duration adjustment potentiometer to the fully clockwise position.

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 yellow wire controls the green LED, whereas, the white 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.

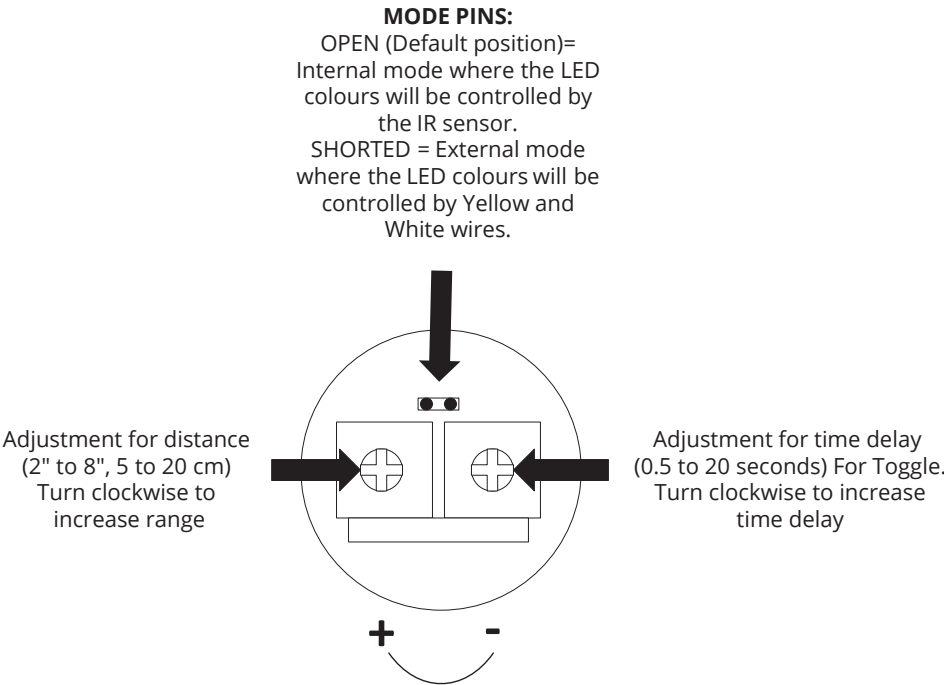


Figure 5.1 Configuration

6. CM-221 to CX-33 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 Restroom Control Kit includes the CX-33 Advanced Logic Relay. A complete wiring diagram is included in this manual.

IMPORTANT: We highly recommend the use of a regulated power supply when powering equipment in certain modes such as the barrier-free washroom application where the strike power may be maintained from a few minutes to many hours. We offer a low-cost board-only regulated power supply - CX-PS13, which will supply clean, filtered & regulated 12 or 24VDC power for the strike and CX-33. 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.

9. ORDERING INFORMATION FOR PART REPLACEMENT

ITEM	PART NUMBER	DESCRIPTION
1	60-31A083	Touchless Sensor Switch With External LED Control
2	CX-33	Advanced Logic Relay
3	CX-MDA	Magnetic Door Contact
4	CX-ED2079	Grade 2 Universal Electric Strike
5	CM-8436VR/4	36" Column "Push To Open" Switch
6	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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File: CXWC18SLVR_Restroom-
Control_Manual_R2.indd
Rev.: November 3, 2025
Part No.: 40-82B371

MODE PINS:
OPEN (Default position)=
Internal mode where the LED
colours will be controlled by
the IR sensor.
SHORTED = External mode
where the LED colours will be
controlled by Yellow and
White wires.

Adjustment for distance
(2" to 8", 5 to 20 cm)
Turn clockwise to
increase range

Adjustment for time
(0.5 to 20 seconds)
Turn clockwise to increase
time delay

**CM-8436VR/4 & CM-8436VR/8B
TOUCHLESS SENSOR SETTINGS**

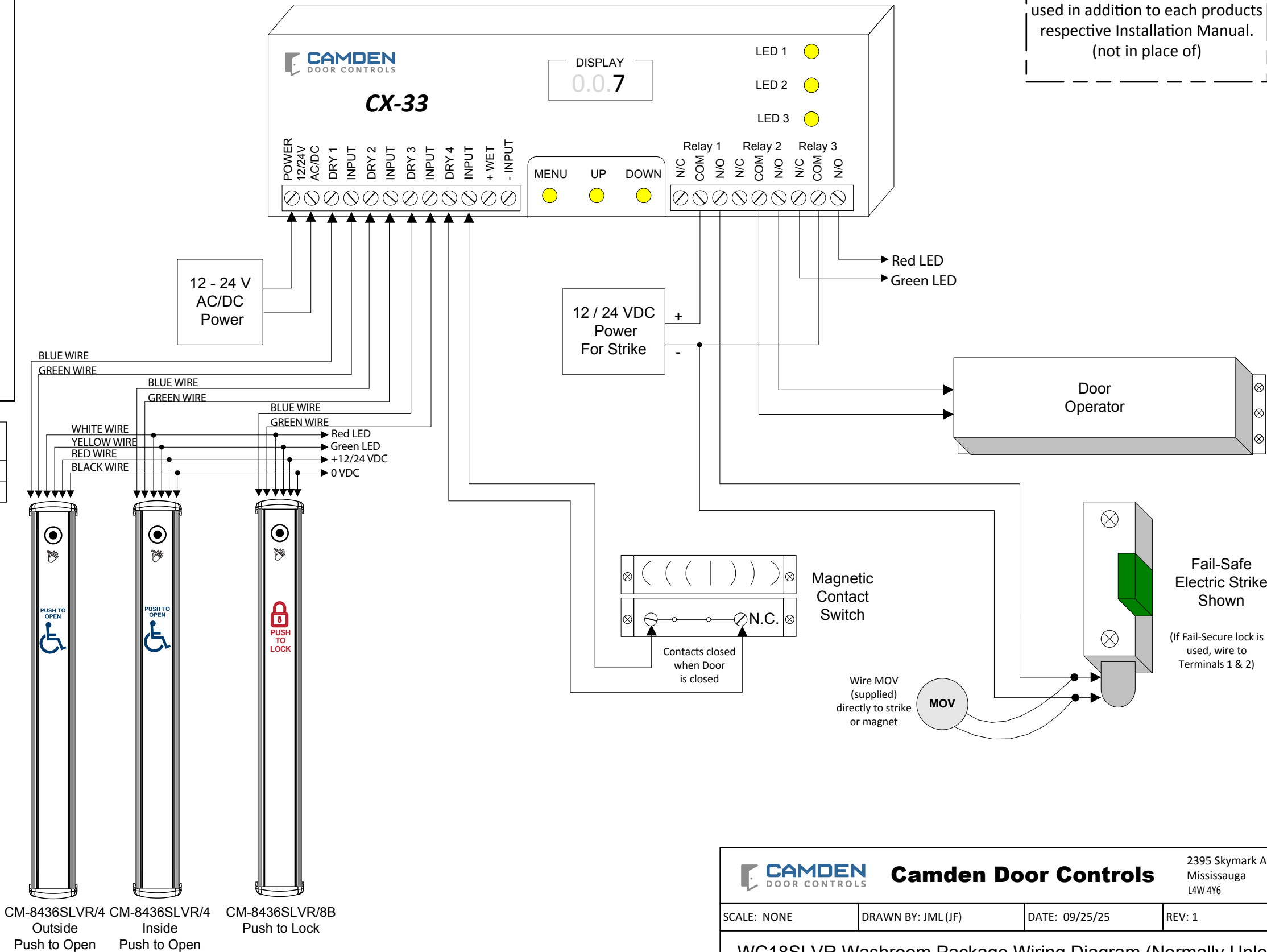
#	Color	Function
1	Red	12 to 24 VDC
2	Black	0 VDC (Ground)
3	Yellow	Green LED controlled by external mode.
4	White	Red/Blue LED, controlled by external mode.
5	Green	Relay: Normally Open
6	Blue	Relay: Common
7	Purple	Relay: Normally Closed

ATTENTION:
CONNECT GREEN (NORMALLY OPEN) AND BLUE (COMMON)
TO THE BLACK WIRES FROM THE SWITCHES IN THE CM-8436VR.

- Notes
1. CX-33 can be set to Mode 7 (Normally Unlocked) or Mode 8 (Normally Locked).

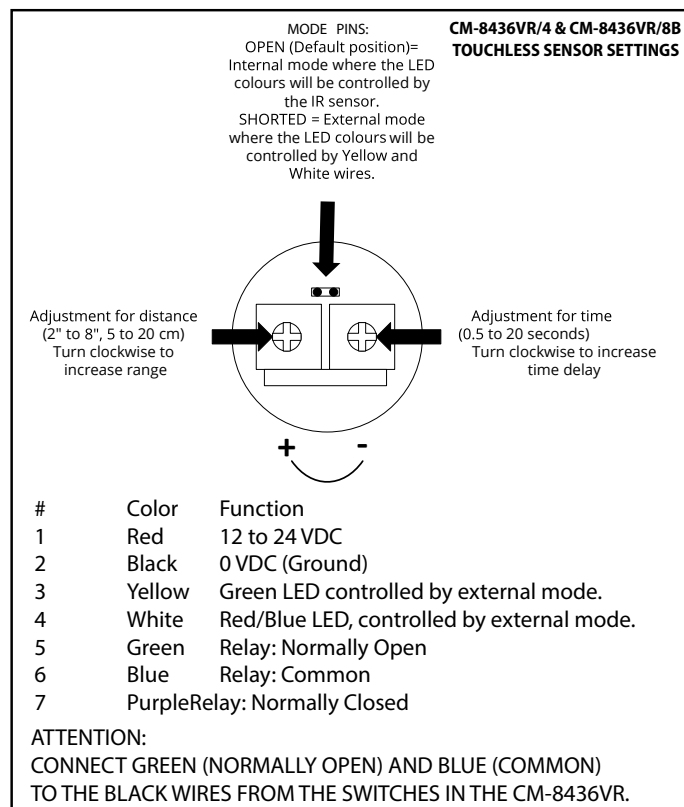
2. Mode 7 = Set Strike to Fail Safe.

3. Mode 8 = Set Strike to Fail Secure.

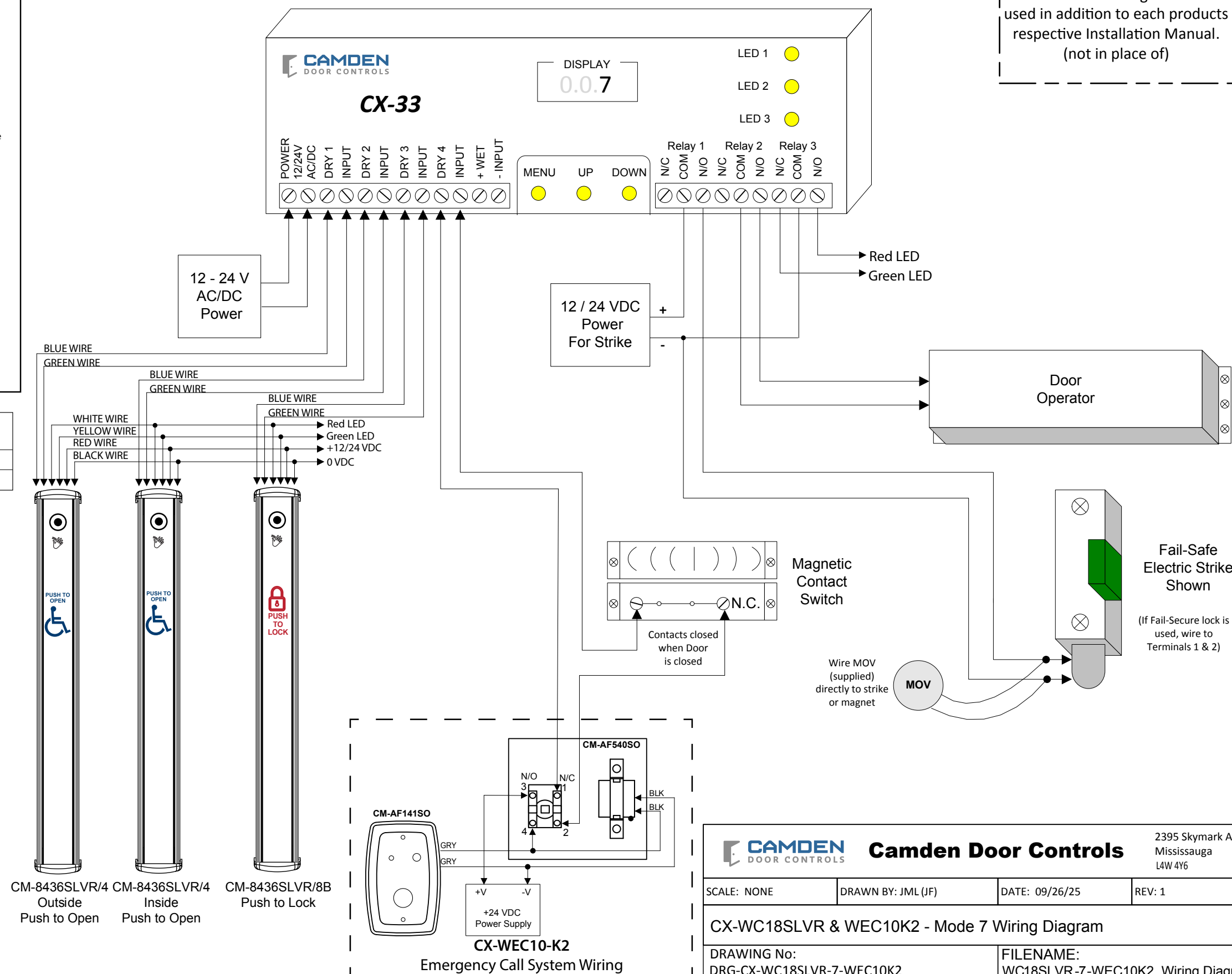


NOTE: This Drawing should be
used in addition to each products
respective Installation Manual.
(not in place of)

		2395 Skymark Ave. Mississauga L4W 4Y6	
SCALE: NONE	DRAWN BY: JML (JF)	DATE: 09/25/25	REV: 1
WC18SLVR Washroom Package Wiring Diagram (Normally Unlocked)			
DRAWING No: DRG-CX-WC18SLVR-7		FILENAME: WC18SLVR-7_Wiring Diagram_R1	



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



MODE PINS:
OPEN (Default position)=
Internal mode where the LED
colours will be controlled by
the IR sensor.
SHORTED = External mode
where the LED colours will be
controlled by Yellow and
White wires.

Adjustment for distance
(2" to 8", 5 to 20 cm)
Turn clockwise to
increase range

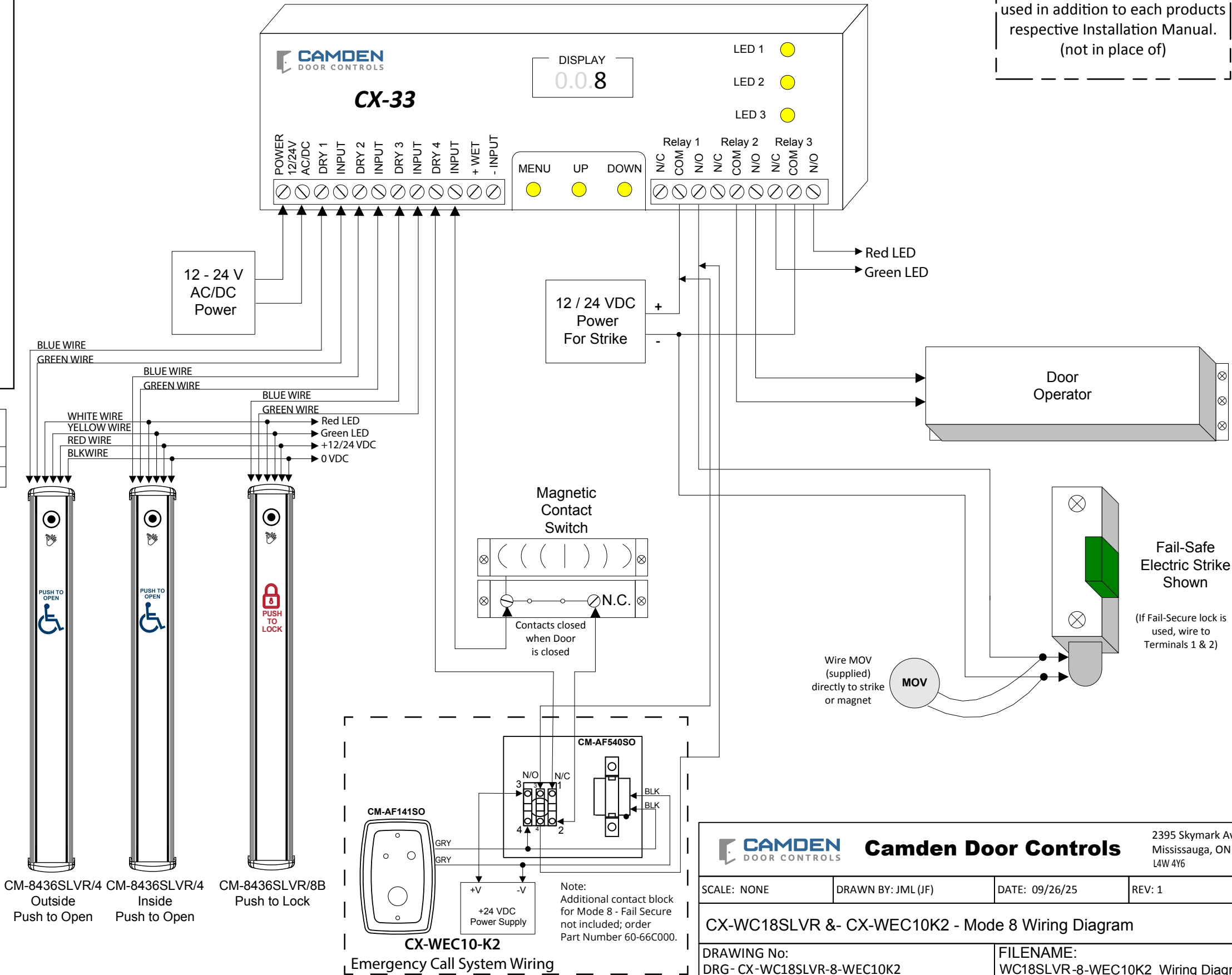
Adjustment for time
(0.5 to 20 seconds)
Turn clockwise to increase
time delay

**CM-8436VR/4 & CM-8436VR/8B
TOUCHLESS SENSOR SETTINGS**

#	Color	Function
1	Red	12 to 24 VDC
2	Black	0 VDC (Ground)
3	Yellow	Green LED controlled by external mode.
4	White	Red/Blue LED, controlled by external mode.
5	Green	Relay: Normally Open
6	Blue	Relay: Common
7	Purple	Relay: Normally Closed

ATTENTION:
CONNECT GREEN (NORMALLY OPEN) AND BLUE (COMMON)
TO THE BLACK WIRES FROM THE SWITCHES IN THE CM-8436VR.

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



NOTE: This Drawing should be used in addition to each products respective Installation Manual.
(not in place of)

Spec Ref # : CX-WC18SLVR & CX-WEC10K2

CX-WC18SLVR - EQUIPMENT PACKAGE:

- 1 CX-33 Multi-Function Relay
- 2 CM-8436VR/4 - 36" STAINLESS STEEL COLUMN SWITCH WITH 'WHEELCHAIR' SYMBOL AND 'PUSH TO OPEN' GRAPHICS WITH VALUEWAVE™ HAND FREE SWITCH AND SIGN, MOUNTING ON SIDE LOAD BACKBOX
- 3 CM-8436VR/8B - 36" STAINLESS STEEL COLUMN SWITCH WITH 'LOCK' SYMBOL AND 'PUSH TO LOCK' GRAPHICS MOUNING WITH VALUEWAVE™ HAND FREE SWITCH AND SIGN
- 4 CX-MDA - MAGNETIC DOOR CONTACT
- 5 CX-ED2079 - GRADE 2 UNIVERSAL ELECTRIC STRIKE

CX-WEC10K2 EQUIPMENT PACKAGE:

- 6 CM-AF540SO - 'PRESS FOR EMERGENCY ASSISTANCE' SWITCH & 'ASSISTANCE REQUESTED' LED ANNUNCIATOR WITH SOUNDER
- 7 CM-AF141SO - 'ASSISTANCE REQUIRED' SINGLE GANG LED DOME LIGHT WITH SOUNDER
- 8 CM-SE21A - EMERGENCY ASSISTANCE SIGN

ADDITIONAL PARTS REQUIRED
BUT NOT INCLUDED WITH THE CX-WC18SLVR & CX-WEC10K2:

- 9 AUTOMATIC DOOR OPERATOR - SUPPLIED BY OTHERS
- 10 CX-PS13 - 12/24 VDC LINEAR POWER SUPPLY
- 11 CX-TRX-4024 - 40VA, 24 VAC TRANSFORMER

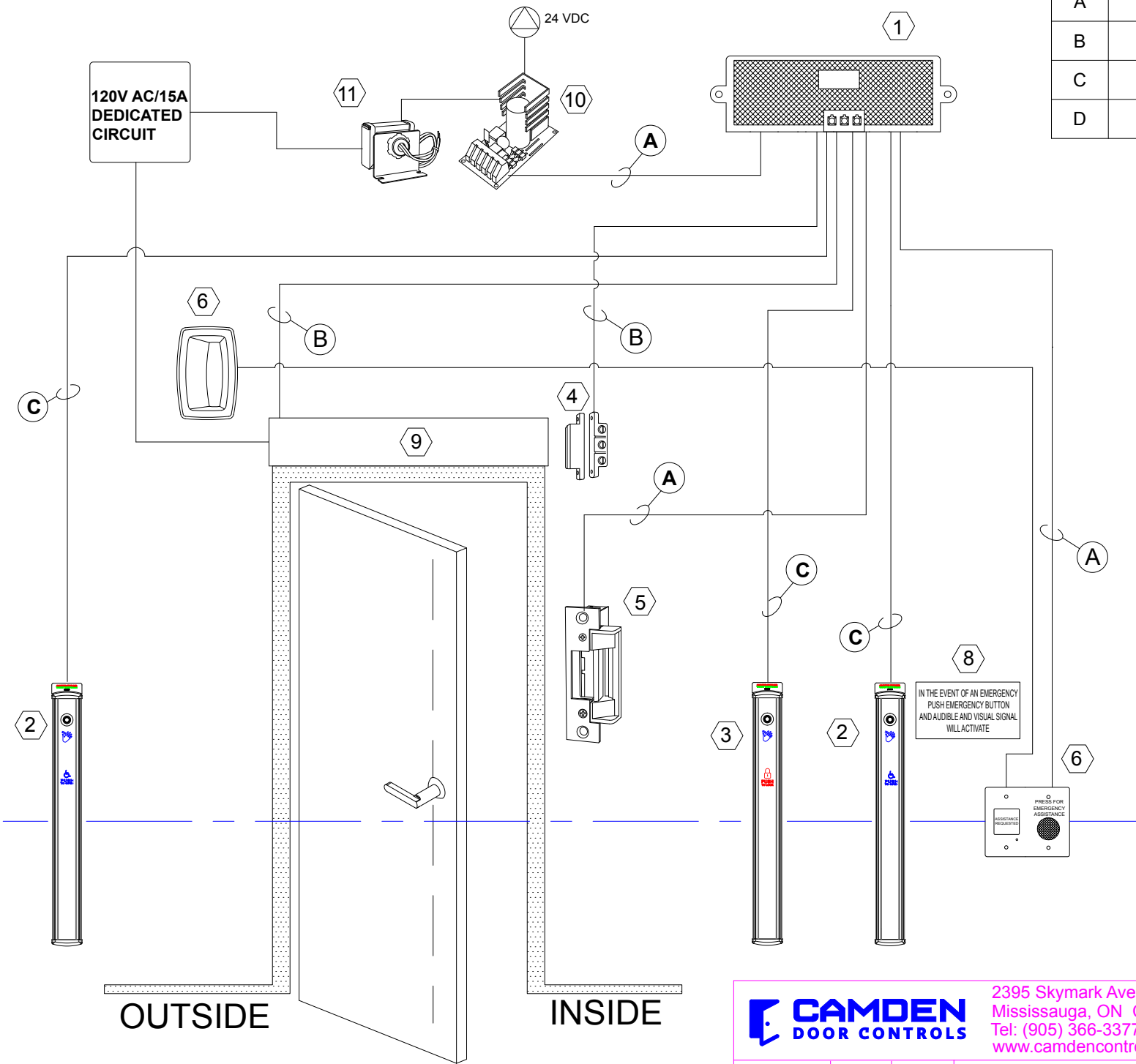
SYSTEM OPERATION

CX-WC18SLVR OPERATION:

- THE DOOR IS NORMALLY CLOSED AND UNLOCKED.
- OPERATING THE EXTERIOR ACTIVE SWITCH OPENS THE DOOR.
- ONCE THE DOOR IS CLOSED, PRESSING THE INTERIOR "PUSH TO LOCK" SWITCH LOCKS THE DOOR, REMOVES THE EXTERIOR SWITCH FROM THE CIRCUIT AND CHANGES THE LED FROM GREEN TO RED.
- PRESSING THE INTERIOR 'WHEELCHAIR' SYMBOL AND 'PUSH TO OPEN' COLUMN SWITCH UNLOCKS AND OPENS THE DOOR, RESETTNG THE SYSTEM.
- IF THE DOOR IS OPENED MANUALLY TO EXIT THE RESTROOM, THE OVERHEAD MAGNETIC CONTACT SWITCH RESETS THE SYSTEM.

EMERGENCY CALL SYSTEM OPERATION:

- THE ' PRESS FOR EMERGENCY ASSISTANCE' MUSHROOM PUSH BUTTON IS ACTIVATED BY THE OCCUPANT.
- THIS ENERGIZES THE LED ANNUNCIATOR AND SOUNDER WITHIN THE WASHROOM, AND THE DOME LIGHT WITH SOUNDER OUTSIDE THE WASHROOM.
- BOTH ANNUNCIATORS WILL BE ENERGIZED UNTIL THE LATCHING MUSHROOM PUSH BUTTON SWITCH IS PULLED OUT.



WIRE SPECIFICATION

A	2 x 18 AWG
B	2 x 22 AWG
C	6 x 20 AWG
D	8 x 22 AWG



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www.camdencontrols.com

	NAME	DATE	TITLE: Riser Diagram		
DRAWN	A.OLISA	MAR-25			
CHECKED					
ENG APPR.					
MFG APPR.					
QA.					
COMMENTS:			SIZE B	DWG. NO. CX-WC18SLVR & CX-WEC10K2_Riser	REV
			SCALE: N/A		SHEET 1 OF 1