



Next generation Camden barrier free restroom control system kits have been updated to now include power supplies and 'Universal' grade 2 electric strikes.

CX-WC13AXSM-PS
Composite from Catalog



Code Compliant Control of Automatic Doors in Restroom Applications

A practical Guide for Equipment Specifiers and Installers



Introduction

The industry is experiencing a rapid growth in the installation of automatic operators on restroom doors, in a wider scope of building occupancies. In addition, new capabilities of traditional devices, and the introduction of completely new types of system components, are significantly improving the access to restrooms by people with disabilities. Where the control of automatic doors in restrooms have historically utilized the same components as those used in entrance/egress applications (with minor tweaks), current restroom controls utilize a range of system components that have been designed to serve these specific requirements.

This guide provides equipment specifiers and system installers with a complete reference of information for control of automatic door operators in restrooms.

Camden offers a wide range of product solutions to meet the diverse requirements and preferences of consulting engineers and specification writers. This edition of our guide includes a number of new product enhancements and new products to serve the expanding market.

The extensive range of information presented in this guide includes a summary of codes, the system components, a range of system design options, project specifications and point-to-point wiring schematics.

Codes & Standards

Barrier free access to buildings and restroom facilities is mandated across North America by state or provincial building codes. In the U.S., barrier free access is also mandated by federal law, with interpretation and enforcement by each state.

In Canada, the National Building Code provides a model building code that is used where no provincial code is adopted and also forms the basis for all provincial building codes. The result of these vastly different approaches is that the Canadian requirements for automatic doors on restrooms are fairly uniform while the American requirements are vastly different from state to state.

The Americans with Disabilities Act (ADA)

In the U.S., ADA is a federal law designed to provide equal access for all citizens. All buildings that are open to the public must provide equal access for people with disabilities. This means that all visitors and occupants must be able to safely enter and exit the building, and must also be able to move throughout the building without difficulty.

There are two key technical regulations that inform the Americans with Disability Act. These are the ADA Accessibility Guidelines (ADAAG) and the Uniform Federal Accessibility Standard (UFAS).

Both the ADAAG and UFAS are based in large part on the technical criteria that is specified in the national voluntary consensus standard, ANSI A117.1



(ANSI) Standards

The American National Standard Institute (ANSI) is a private, nonprofit membership organization that provides a voluntary system for the development of standards, including those applicable to the installation of automatic doors.

There are two ANSI standards that are commonly cited by both U.S. and Canadian building codes in regards to automatic doors on restrooms:

ANSI A117.1 is the standard for Buildings and Facilities - Providing Accessibility and Usability for Physically Disabled People.

ANSI A156.19 is the standard for Power Assist and Low Energy Power Operated Doors.

No excerpts of these standards are presented in this guide. For more information, please purchase these publications.

Building Codes

As stated above, each U.S. state has the power to interpret federal ADA requirements and to legislate those requirements as law. As a result, states have several different approaches to accessibility regulations.

Some states have adopted ANSI A117.1, the UFAS, ADAAG or a model building codes (such as the International Building Code or Universal Building Code), all of which are relatively similar.

Another group of states rely on one or another of those sources as a basis for their regulations but have other requirements and do not reference by name.

A third and smaller group of states have legislated their own unique standard and code requirements.

No excerpt of Building Codes or regulations is presented in this guide. For more information on the codes applicable to your project, please contact the authority having jurisdiction.

Other Codes

In addition to the building codes discussed above, there are other codes that your restroom project may need to comply with. In particular, the NFPA National Fire Code or International Fire Code. Since restroom doors are egress doors (i.e. doors used to exit an occupied area of a building in the event of a fire), compliance will be required by your AHJ.

An important note regarding Fire Codes and the system designs shown in this guide; all of the system designs contained in this guide are based upon the use of fail-safe electric strikes and mechanical 'swing-free' door locking hardware (i.e. handles that do not lock on the inside of the restroom). Further, where an emergency power generator is in place to provide standby power to the automatic door operator in the case of power failure, 2 hour battery standby power should be installed to provide power to the electric strike.

Restroom Control System Components

This section provides information for each of the control, activation and annunciation components that could be used in a restroom control application with a power supply.

Each component in this section contains the Camden product model number, name/description, image, the general application and a project specification. In addition, Camden Door Controls offers restroom control kits for each design option; the list of components packaged in each kit is listed at the bottom of each system option.



CX-33 Advanced Logic Relay Controller



Application: New product, specifically designed for single occupant restroom applications. Used as the door operator controller for most restroom systems.

Specification: The logic relay to be used throughout the site/complex shall be Camden Door Controls model CX-33. The logic relay provides visual responses and status information on a three segment LED display. Programming buttons shall be freely accessible to the installation technician. The LED display appears for 10 Seconds or more when entering program mode. The logic relay provides Mixed-Mode triggering. Bi-directional door sequencer with a minimum of 4 inputs shall be provided. The logic relay shall operate in 'Normally Locked' and 'Normally Unlocked' restroom modes. An output dedicated for "Occupied & Door Locked" signage shall be provided. The logic relay shall incorporate a low energy sensor inhibitor. The response time shall be not less than 5 ms. 3 variable hold timers and 3 variable delay timers shall be provided for strike, operator and lock status annunciation. A wet input shall be provided accepting 5 to 120V AC/DC. Output contacts shall have a minimum rating of 3A @ 24 VDC. The logic relay shall carry a 3 year manufacturer's warranty.

CX-33PS Relay, 2 Amp Power Supply Cabinet & Transformer



Application: A complete code compliant kit for any timed door application. Installation is quick with Camden's CX-33 relay pre-wired to a color-coded set of labeled terminal strips.

Specification: The advanced logic control relay and power supply cabinet to be used throughout the site/complex shall be Camden Door Controls model CX-33PS. This relay provides a pre-mounted 2 Amp 12,24 VDC filtered and regulated power supply. Enhanced security features include; lock down mode and delayed relay activation. There are three blue 8-segment LED displays for easy programming and configuration with five conduit knockouts per side. It is able to supply power to controls and annunciators, as well as electrified locking devices. The logic relay shall carry a 3 year manufacturer's warranty.



CX-EMF-2 Multi-Function Relay Controller



Application: Used as the door operator controller where there are one or two doors entering the restroom, when 'Assistance Required' button and indicator is required or when a time-out feature is required to automatically unlock the restroom door.

Specification: The multi-function relay to be used throughout the site/complex shall be Camden Door Controls model CX-EMF-2. The multi-function relay shall be able to process signals from multiple sources to control one or two doors. The multi-function relay shall provide visual indicators to determine its status. An emergency input shall be provided to allow a panic switch to unlock, open the door and send an emergency signal for assistance. The unit shall be designed to control normally unlocked or normally locked restrooms, as well as 2-door (interlocked) restrooms. The multi-function relay shall have a 15 minute automatic reset and unlock feature. All output contacts shall be rated 3A @ 30 VDC minimum. Output contacts shall have adjustable time delays up 30 seconds. The multi-function relay shall operate on 12/24 V AC/DC. The warranty shall be 3 years minimum.

CX-EMF-2PS Relay, 2 Amp Power Supply Cabinet & Transformer



Application: The CX-EMF-2 in a pre-wired power supply cabinet acts as the door operator controller where there are one or two doors entering the restroom. When 'Assistance Required' button and indicator is required or when a time-out feature is required to automatically unlock the restroom door.

Specification: The multi-function relay door control and power supply to be used throughout the site/complex shall be Camden Door Controls model CX-EMF-2PS. The multi-function relay shall be able to process signals from multiple sources to control one or two doors. It shall provide visual indicators to determine its status. An emergency input shall be provided to allow a panic switch to unlock, open the door and send an emergency signal for assistance. The unit shall be designed to control normally unlocked or normally locked restrooms, as well as 2-door (interlocked) restrooms. The multi-function relay shall have a 15 minute automatic reset and unlock feature. All output contacts shall be rated 3A @ 30 VDC minimum. Output contacts shall have adjustable time delays up 30 seconds. The multi-function relay shall operate on 12/24 V AC/DC. The warranty shall be 3 years minimum.

CM-2520/4854SE1 Surface 'Push To Open' & 'Push To Lock'
 Combo Push Plate Switch, Blue/Green/Red
 Illumination and Sign



Application: New: Camden is the 1st manufacturer to combine 'PUSH TO OPEN' and 'PUSH TO LOCK' switches in an illuminated (changing state) enclosure, with signage. This one code compliant double gang device takes the place of 3 separate components inside the restroom – reducing installation costs and improving service to building occupants. French language graphics available upon request.

Specification: The illuminated 'PUSH TO LOCK' and 'PUSH TO OPEN' combination push plate switch to be used throughout the site/complex shall be Camden Door Controls model CM-2520/4854SE1. The switch shall be easy-to-activate, ADA compliant, 4-1/2" square surface mount. Switches shall be all-active, whereby pressing any part of the faceplate will activate the device. Faceplates shall be constructed of 18-gauge stainless steel. Switches shall use plastic spacers and rubber dampers for noise reduction. Switches shall be rated at a minimum of 15A @ 30 VDC. Graphics and text shall comply with ANSI A117.1 and have debossed and paint filled (Blue/Red) Graphics/Text on the Stainless Steel. Illuminated ring shall be 1/8" vandal resistant Lexan™. Illuminated switch shall have field selectable Green/Red color display. Color can be defined as active or idle. Illuminated color shall change on activation and deactivation. The switch component shall be UL 61058-1, CAN/CSA-C22.2 compliant. The LED illuminated annunciators shall be 12/24V AC/DC. The illuminated push plate shall carry a 3 warranty.



CM-2520/4855SE1 Flush 'Push To Open' & 'Push To Lock'
 Combo Push Plate Switch, Blue/Green/Red
 Illumination and Sign



Application: New: Camden is the 1st manufacturer to combine 'PUSH TO OPEN' and 'PUSH TO LOCK' switches in an illuminated (changing state) enclosure, with signage. This one code compliant double gang device takes the place of 3 separate components inside the restroom – reducing installation costs and improving service to building occupants. French language graphics available upon request.

Specification: The illuminated 'PUSH TO OPEN' and 'PUSH TO LOCK' combination push plate switch to be used throughout the site/complex shall be Camden Door Controls model CM-2520/4855SE1. The switch shall be easy-to-activate, ADA compliant, 4-1/2" square flush mount. Switches shall be all-active, whereby pressing any part of the faceplate will activate the device. Faceplates shall be constructed of 18-gauge stainless steel. Switches shall use plastic spacers and rubber dampers for noise reduction. Switches shall be rated at a minimum of 15A @ 30 VDC. Graphics and text shall comply with ANSI A117.1 and have debossed and paint filled (Blue/Red) Graphics/Text on the Stainless Steel. Illuminated ring shall be 1/8" vandal resistant Lexan™. Illuminated switch shall have field selectable Green/Red color display. Color can be defined as active or idle. Illuminated color shall change on activation and deactivation. The switch component shall be UL 61058-1, CAN/CSA-C22.2 compliant. The LED illuminated annunciators shall be 12/24V AC/DC. The illuminated push plate shall carry a 3 warranty.



CM-45/4 All-Active™ 4-1/2" Square 'Push to Open' Push Plate Switches with Wheelchair	
	<p>Application: Used as basic switch to energize the automatic door operator, to open the door from inside or outside the restroom. Ontario Building Code requires a wheelchair symbol for 'PUSH TO OPEN' push plate switches. Add '2' for wheelchair only or '4' for wheelchair symbol and 'PUSH TO OPEN' text. French language versions available upon request.</p>
<p>Specification: The push plate switches to be used throughout the site/ complex shall be Camden Door Controls CM Series. The push button shall incorporate a large push plate 4-1/2" or 6" in diameter. The switch shall be easy-to-activate and ADA compliant. Switches shall be all-active, whereby pressing any part of the faceplate will activate the device. Faceplates shall be constructed of 18-gauge stainless steel or solid brass. Switches shall use plastic spacers and rubber dampers for noise reduction. The Push Plate Switch shall be ADA compliant requiring a minimal force to activate. The Push Plate shall be constructed of Stainless Steel or Brass. Output contacts shall be rated 15A @ 30 VDC minimum. Graphics and text shall comply with ANSI A117.1 and be permanently laser engraved or debossed prominently on the faceplate. The switch component shall be UL 61056-1, CAN/CSA-C22.2 compliant. This switch shall carry a 3 year warranty.</p>	

CM-400R/8 'Push to Lock' Mushroom Push Button	
	<p>Application: Used as a basic switch to energize an electric strike and lock the restroom door with 'PUSH TO LOCK' laser engraved text.</p>
<p>Specification: The single gang, mushroom push button switches to be used throughout the site/complex shall be Camden Door Controls model CM-400R/8. The push button shall incorporate a large button at least 1.5" in diameter. The button shall be vandal resistant and have a free-spinning collar with a metal back ring. The switch shall be mountable in a single gang electrical box. The faceplate shall be minimum 12 AWG Stainless Steel. Output contacts shall be rated 10A @ 30 VDC minimum. 'Push to Lock' verbiage shall be permanently laser engraved or silk screened prominently on the faceplate. This push button shall be UL 61056-1, CAN/CSA-C22.2 compliant. This switch shall carry a 3 year warranty.</p>	

CM-45/454SE1

Surface 'Push to Open' Push Plate Switches with Blue/Green/Red Illumination and Sign



Application: A new type of push plate switch and sign that has been specifically designed for restroom applications. The illumination of the switch changes color based upon the status of the electric strike, used to lock the restroom door.

NEW: Camden illuminated push plate switches offer field selectable blue/green/red illumination. Add graphic option in place of 'X'. Add '8' for 'PUSH TO LOCK' text. Add '4' for wheelchair symbol and 'PUSH TO OPEN' text. French language graphics available upon request.

Specification: The illuminated push plate switches to be used throughout the site/complex shall be Camden Door Controls model CM-45/454SE1. The switch shall be easy-to-activate, ADA compliant, 4-1/2" square surface mount. Switches shall be all-active, whereby pressing any part of the faceplate will activate the device. Faceplates shall be constructed of 18-gauge stainless steel or solid brass. Switches shall use plastic spacers and rubber dampers for noise reduction. Switches shall be rated at a minimum of 15A @ 30 VDC. Graphics and text shall comply with ANSI A117.1 and be permanently laser engraved on the Stainless Steel or Solid Brass plate. Illuminated ring shall be 1/8" vandal resistant Lexan™. Illuminated switch shall have field selectable green/red color display. Color can be defined as active or idle. Illuminated color shall change on activation and deactivation. The switch component shall be UL 61058-1, CAN/CSA-C22.2 compliant. The LED illuminated annunciators shall be 12/24V AC/ DC. The illuminated push plate shall carry a 3 warranty.



CM-45/455SE1

Flush 'Push to Open' Push Plate Switches with Blue/Green/Red Illumination and Sign





Application: A new type of push plate switch and sign that has been specifically designed for restroom applications. The illumination of the switch changes color based upon the status of the electric strike, used to lock the restroom door.


NEW: Camden illuminated push plate switches offer field selectable blue/green/red illumination. Add graphic option in place of 'X'. Add '8' for 'PUSH TO LOCK' text. Add '4' for wheelchair symbol and 'PUSH TO OPEN' text. French language graphics available upon request.

Specification: The illuminated push plate switches to be used throughout the site/complex shall be Camden Door Controls model CM-45/455SE1. The switch shall be easy-to-activate, ADA compliant, 4-1/2" square flush mount. Switches shall be all-active, whereby pressing any part of the faceplate will activate the device. Faceplates shall be constructed of 18-gauge stainless steel or solid brass. Switches shall use plastic spacers and rubber dampers for noise reduction. Switches shall be rated at a minimum of 15A @ 30 VDC. Graphics and text shall comply with ANSI A117.1 and be permanently laser engraved on the Stainless Steel or Solid Brass plate. Illuminated ring shall be 1/8" vandal resistant Lexan™. Illuminated switch shall have field selectable green/red color display. Color can be defined as active or idle. Illuminated color shall change on activation and deactivation. The switch component shall be UL 61058-1, CAN/CSA-C22.2 compliant. The LED illuminated annunciators shall be 12/24V AC/ DC. The illuminated push plate shall carry a 3 warranty.




CM-AF500 Single Gang 'Occupied When Lit' LED Annunciator	
	<p>Application: A new type of illuminated sign designed specifically for restroom control applications. (6) Interchangeable message labels supplied; 'LOCKED' in red, 'UNLOCKED' in green, 'ARMED' in red, 'OCCUPIED WHEN LIT' in green and 'OCCUPIED/OCCUPÉ' in red and green. Other message labels available upon request.</p>
<p>Specification: The single gang, LED illuminated annunciators to be used throughout the site/complex shall be Camden Door Controls model CM-AF500. The faceplate shall be constructed of heavy gauge stainless steel and shall have a 1-3/8" square LED illuminated message, visible only when lit. When not lit, the message shall not be readily legible. The LED illuminated annunciators shall be constructed so that the message cannot be scratched or removed by vandalism. For installation outdoors, the face of the units shall be sealed and mounted to the electrical box utilizing a weatherproof rubber gasket. The unit shall be supplied with 4 insert message labels, including English only and English/French text. The unit shall be supplied with stainless steel Torx or snake eye security screws. The LED illuminated annunciators shall be 12/24V DC.</p>	

CM-AF503 Single Gang 'Occupied' Horizontal, Curved LED Annunciator	
	<p>Application: A new type of illuminated sign designed specifically for use with Column™ switches and restroom control applications. (6) Interchangeable message labels supplied; 'LOCKED' in red, 'UNLOCKED' in green, 'ARMED' in red, 'OCCUPIED WHEN LIT' in green and 'OCCUPIED/OCCUPÉ' in red and green. Other message labels available upon request.</p>
<p>Specification: The single gang, horizontal LED illuminated annunciators to be used throughout the site/complex shall be Camden Door Controls model CM-AF503. The faceplate shall be constructed of heavy gauge stainless steel and shall have a 1-3/8" square LED illuminated message, visible only when lit. When not lit, the message shall not be readily legible. The LED illuminated annunciators shall be constructed so that the message cannot be scratched or removed by vandalism. For installation outdoors, the face of the units shall be sealed and mounted to the electrical box utilizing a weatherproof rubber gasket. The unit shall be supplied with 6 insert message labels, including English only and English/French text. The unit shall be supplied with stainless steel Torx or snake eye security screws. The LED illuminated annunciators shall be 12/24V DC.</p>	

<p>CM-AF550R</p>	<p>Double Gang Mushroom ‘Push to Lock’ Button and LED Annunciator</p>
	<p>Application: This product combines the CM-400R/8 mushroom “push to lock’ push button and ‘locked’ LED annunciator in one double gang unit.</p>
<p>Specification: The double gang mushroom push button switch and LED annunciator to be used throughout the site/complex shall be Camden Door Controls model CM-AF550R. The push button shall incorporate a 1.5” in diameter button and shall be vandal resistant and have a free-spinning collar with a metal back ring. Output contacts shall be rated 10A @ 30 VDC minimum. ‘PUSH TO LOCK’ text shall be permanently laser engraved. The push button shall be UL 61056-1, CAN/CSA-C22.2 compliant. LED illuminated annunciator shall have a 1-3/8” square LED illuminated message, visible only when lit. When not lit, the message shall not be readily legible. The LED illuminated annunciators shall be constructed so that the message cannot be scratched or removed by vandalism. This unit shall carry a 3 year warranty.</p>	



<p>CM-7536</p>	<p>36” Column Switch™ ‘Push to Lock’ Anodized Aluminum Finish</p>
	<p>Application: A 36” Column™ switch that is easily operated at any angle by hand, foot or body. These anodized aluminum switches have adjustable leveling screws for easy installation on uneven walls .</p>
<p>Specification: The Column™ switches to be used throughout the site /complex shall be Camden Door Controls model CM-7536/4 (wheelchair symbol with ‘PUSH TO OPEN’ text) and CM-7536/8B (lock symbol with ‘PUSH TO LOCK’ text). These switches shall be easy-to-activate, ADA compliant, 36” tall. Switches shall be all-active, whereby pressing any part of the faceplate will activate the device. Faceplates shall be constructed of anodized aluminum. Switches shall use plastic spacers and rubber dampers for noise reduction. Switches shall be rated at a minimum of 15A @ 30 VDC.</p>	



<h2 style="margin: 0;">CM-331/42S-SGLR</h2>	<h3 style="margin: 0;">‘Wave to Open’ Touchless Switch with Green/Red Illumination and Sign</h3>
	<p>Application: Camden offers a more hygienic and convenient solution to restroom control with the option to use touchless activation switches. The illumination of the switch changes red/green color based upon the status of the electric strike, used to lock the restroom door. Illumination and instructional signage are ordered as a suffix to the switch model. French language graphics available upon request.</p>
<p>Specification: The illuminated touchless switches to be used throughout the site/complex shall be Camden Door Controls model CM-331/42S-SGLR. The switch shall be ADA and ROHS compliant. Touchless switches shall have an 18 gauge stainless steel faceplate, be field selectable fail safe/fail secure, have an adjustable range of 1” to 28” operating range and one SPDT form ‘C’ relay output, rated 3A @ 30V. Graphics and text shall permanently laser engraved. Illuminated ring shall be 1/8” vandal resistant Lexan™. Illuminated touchless switches shall have field selectable Green/Red color display. Color can be defined as active or idle. Illuminated color shall change on activation and deactivation. The touchless switches shall be 12/24V AC/ DC. The illuminated push plate shall carry a 3 warranty.</p>	

<h2 style="margin: 0;">CM-331/43S-SGLR</h2>	<h3 style="margin: 0;">‘Wave to Lock’ Touchless Switch with Green/Red Illumination and Sign</h3>
	<p>Application: Camden offers a more hygienic and convenient solution to restroom control with the option to use touchless activation switches. The illumination of the switch changes red/green color based upon the status of the electric strike, used to lock the restroom door. Illumination and instructional signage are ordered as a suffix to the switch model. French language graphics available upon request.</p>
<p>Specification: The illuminated touchless switches to be used throughout the site/complex shall be Camden Door Controls model CM-331/43S-SGLR. The switch shall be ADA and ROHS compliant. Touchless switches shall have an 18 gauge stainless steel faceplate, be field selectable fail safe/fail secure, have an adjustable range of 1” to 28” operating range and one SPDT form ‘C’ relay output, rated 3A @ 30V. Graphics and text shall permanently laser engraved. Illuminated ring shall be 1/8” vandal resistant Lexan™. Illuminated touchless switches shall have field selectable Green/Red color display. Color can be defined as active or idle. Illuminated color shall change on activation and deactivation. The touchless switches shall be 12/24V AC/ DC. The illuminated push plate shall carry a 3 warranty.</p>	



CM-325/42S Short Range Touchless Switch



Application: Camden offers a more hygienic and convenient solution to restroom control with the option to use touchless activation switches. French language graphics available upon request.

Specification: The illuminated touchless switches to be used throughout the site/complex shall be Camden Door Controls model CM-325/42S. The switch shall be ADA and ROHS compliant. Touchless switches shall have an 18 gauge stainless steel faceplate, be field selectable fail safe/fail secure, have an adjustable range of 1" to 30" operating range and one SPDT form 'C' relay output, rated 3A @ 30V. Graphics and text shall permanently laser engraved. Illuminated ring shall be 1/8" vandal resistant Lexan™. The touchless switches shall be 12/24V AC/DC. The push plate shall carry a 3 warranty.

CX-ED2079 'Universal' Grade 2 Electric Strike



Application: 12/24V, AC/DC grade 2 electric strike is used to electrically lock the restroom door. Supplied with 3 faceplates and compatible with cylindrical locksets with 5/8" (15.9mm) latch projection. Regulated power supply required. Do not power using automatic door operator axillary output.

Specification: The electric door strike used throughout the site/complex shall be Camden Door Controls model CX-ED2079. The electric door strike shall be 12/24V, AC/DC, rated for 1000lbs. static strength, with a current draw not more than 300mA. The electric strike shall operate as fail safe. Three faceplates shall be provided, for mounting on ANSI square and ANSI round latch openings, as well as wood door frames. The strike is to provide horizontal adjustment of the strike body, to accommodate door misalignment. The strike shall carry a 5 year replacement warranty.

CX-MDA Surface Mount Magnetic Door Contacts



Application: Magnetic door contact is used to confirm door closed status (prior to locking the electric strike and to reset the system should a restroom occupant exit the restroom without using the 'push to open' push plate switch. Camden also offers SPDT surface contact (CX-MDC) and SPST recessed contact (CX-MDH).

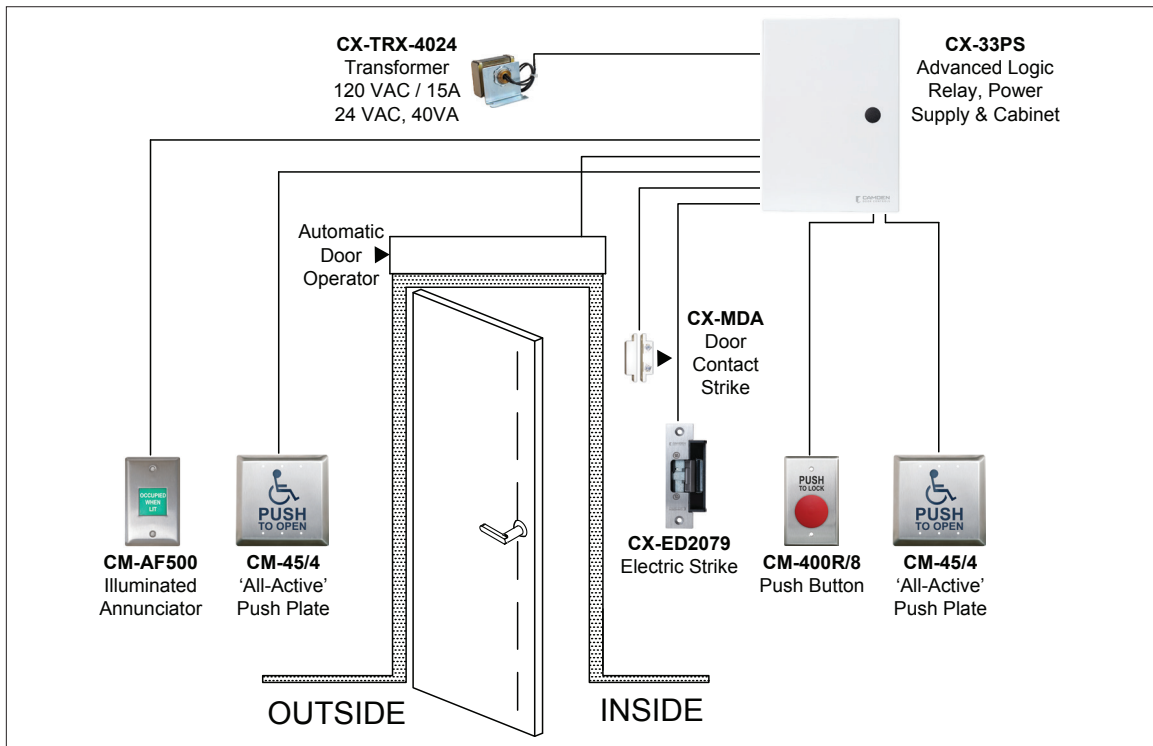
Specification: The magnetic contracts used for door status indication used throughout the site/complex shall be Camden Door Controls model CX-MDA. They shall be white, surface mount, with SPST contacts and carry a 3 year warranty.

Restroom Control Applications

This section presents a complete range of system design options for restroom control, starting with the most basic system design and ending with systems that include multiple entry doors 'Assistance Required' notification. Each system design is supported by a title and a summary description of the sequence of operation. In addition, Camden Door Controls offers restroom control kits for each design option; the list of components packaged in each kit is listed at the bottom of each system option.

Pushbutton and Annunciator System

- CX-WC11ASM-PS Surface Mount Switches & Annunciator
- CX-WC11AFM-PS Flush Mount Switches & Annunciator



This is a control system where the restroom door is locked by 'PUSH TO LOCK' mushroom pushbutton and an illuminated annunciator outside the restroom providing a visual indicator that is activated when the restroom is occupied/locked. The advanced logic relay controls the electric strike, door operator, All-Active push plate switches, and the 'PUSH TO LOCK' mushroom pushbutton and the illuminated annunciator.

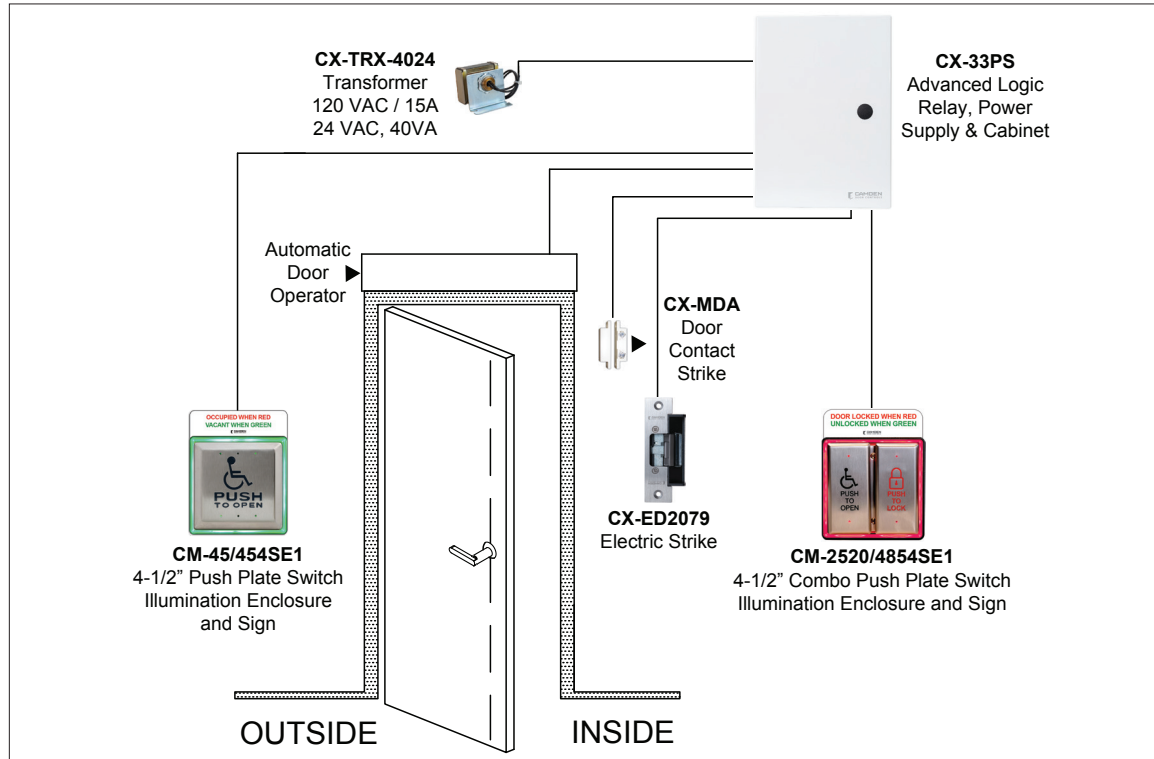
The door is normally closed and either locked or unlocked. Pressing the exterior push plate unlocks and opens the door. Once inside and the door is closed, pressing the 'PUSH TO LOCK' mushroom pushbutton, locks the door, disables the exterior 'PUSH TO OPEN' push plate switch and illuminates the exterior annunciator to show 'OCCUPIED WHEN LIT'. Pressing the interior push plate switch unlocks the door, deactivates the illuminated annunciator and resets the system. If the door is opened manually to exit the restroom, the overhead magnetic contact switch resets the system.

Camden CX-WC11AFM-PS Restroom Control Kit Components:

CX-WC11AFM-PS flush mounted kits include everything for a complete installation including: CX-33PS Control and Power Supply cabinet, (2) CM-45/4 Square 'PUSH TO OPEN' Push Plate Switches, CM-400R/8 'PUSH TO LOCK' Mushroom Push Button, CM-AF500 'OCCUPIED' Single Gang LED Annunciator, CX-MDA Magnetic Door Contact and CX-ED2079 Universal Grade 2 ANSI electric strike. The CX-WC11ASM surface mount kit also includes mounting boxes for Push Plate Switches, Mushroom Push Button and LED Annunciator.

Aura™ Illuminated Push Plate Switch System

- CX-WC13AXSM-PS Surface Mount Push Plate Switches
- CX-WC13AXFM-PS Flush Mount Push Plate Switches



This system is for a single occupant restroom, either locked or unlocked. The CX-WC13AXSM kit is a control system where the restroom door is opened and locked by dual color push plate switches providing visual indication and confirmation the door is locked and the restroom is occupied. The advanced logic relay controls the electric strike, door operator, All-Active push plate switches and surface mount Aura™ illuminated push plate switches.

The door is normally closed and either locked or unlocked. Pressing the exterior 'PUSH TO OPEN' Aura™ push plate opens the door. The Aura™ push plate ring turns red. Once inside and the door is closed, pressing the illuminated 'PUSH TO LOCK' push plate, changes the color to red and locks the door. To exit, press the interior 'PUSH TO OPEN' push plate to unlock the door and reset the system. The 'PUSH TO LOCK' Aura™ push plate switch illuminated ring turns green and the exterior 'PUSH TO OPEN' Aura™ push plate outer ring turns green. If the door is opened manually to exit the restroom, the magnetic door contact switch resets the system.

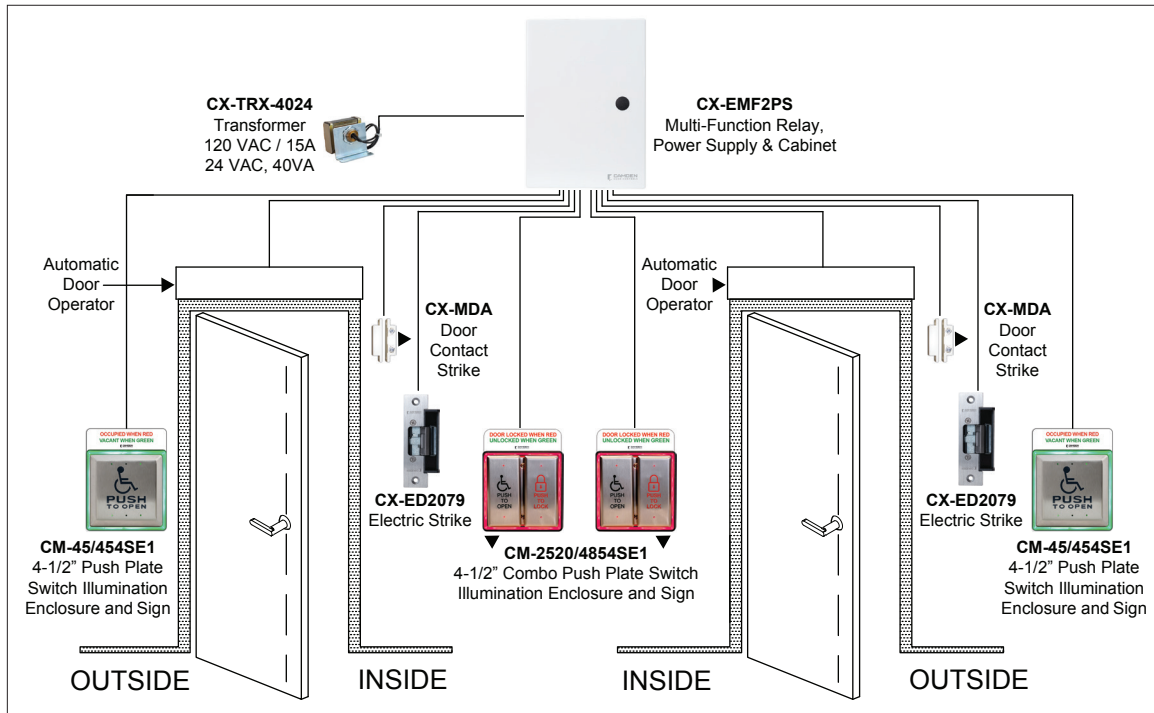
Camden CX-WC13AXSM-PS Restroom Control Kit Components:

CX-WC13AXSM-PS surface mounted kits include everything for a complete installation including: CX-33PS Control and Power Supply cabinet, CM-2520/4854SE1 Illuminated combination Push Plate Switch 'PUSH TO LOCK' and 'PUSH TO OPEN' with Wheelchair symbol, CM-45/454SE1 Illuminated Push Plate Switch 'PUSH TO OPEN' with Wheelchair symbol, CX-MDA surface mount Magnetic Door Contact and CX-ED2079 Universal Grade 2 ANSI electric strike. The CX-WC13AXFM-PS flush mount kit also includes illuminated mounting boxes for Push Plate Switches.



Two Door Restroom System

- CX-WC14AXSM-PS Surface Mount Push Plate Switches
- CX-WC14AXFM-PS Flush Mount Push Plate Switches



This system is used in facilities that have shared restrooms between two suites. The CX-WC14AXSM-PS kit is a control system where the restroom doors are opened and locked by Aura™ dual color push plate switches providing visual indication and confirmation the doors are locked and the restroom is occupied. The advanced relay controls both door operators, electric strikes, All-Active push plate switches and surface mount Aura™ illuminated push plate switches.

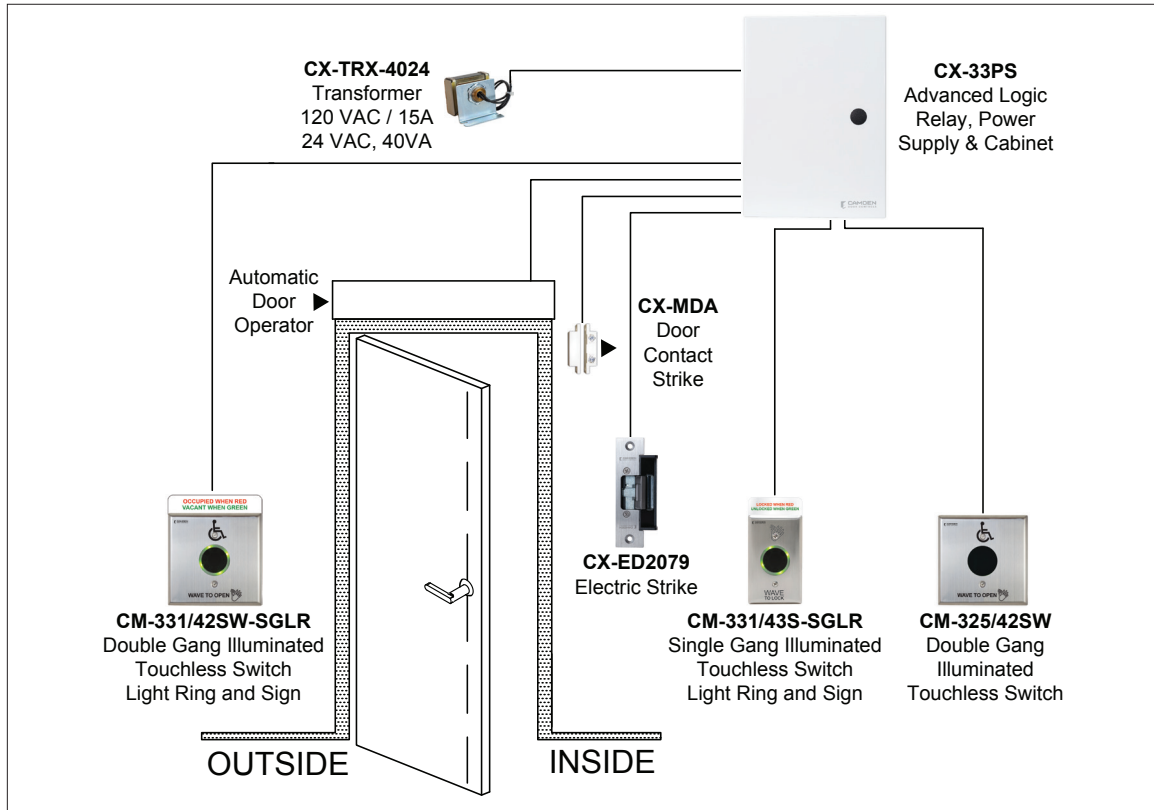
The doors are normally closed and unlocked. The exterior 'PUSH TO OPEN' Aura™ illuminated push plate switches outer rings are green indicating the restroom is vacant. Pressing either 'PUSH TO OPEN' switch will open the respective door. Once the door is closed, pressing the 'PUSH TO LOCK' Aura™ illuminated push plate switch will lock both doors. The 'PUSH TO LOCK' outer ring will glow red indicating the doors are locked. The exterior Aura™ illuminated push plate rings will turn red indicating the restroom is occupied. Pressing either 'PUSH TO OPEN' All-Active push plate switch will open the respective door and reset the system. Aura™ illuminated push plate switches will glow green indicating the restroom is vacant. If the door is opened manually to exit the restroom, the overhead magnetic contact switch resets the system.

Camden CX-WC14AXSM-PS Restroom Control Kit Components:

CX-WC14AXSM-PS Series surface mounted kits include everything for a complete installation including: (1) CX-EMF2PS: Multi-Function Relay controller, 2 Amp power supply, cabinet and transformer (2) CM-2520/4854SE1 Illuminated combination Push Plate Switches 'PUSH TO LOCK' and 'PUSH TO OPEN' with Wheelchair symbol, (2) CM-45/454SE1 Illuminated Push Plate Switches 'PUSH TO OPEN' with Wheelchair symbol, (2) CX-MDA surface mount Magnetic Door Contacts and (2) CX-ED2079 Universal Grade 2 ANSI electric strikes. The CX-WC14AXFM-PS Flush Mount kit also includes illuminated enclosures for all Push Plate Switches.

'Touchless Switch' SureWave™ Restroom System

• CX-WC16FM-PS Touchless Switches



This system is for a single occupant restroom, either locked or unlocked. The CX-WC16FM-PS kit is a touchless switch control system where the restroom door is opened and locked by dual color touchless switches providing visual indication and confirmation the door is locked and the restroom is occupied. The advanced logic relay controls the electric strike, door operator, touchless switches and illumination.

The door is normally closed and either locked or unlocked. Pressing the exterior 'WAVE TO OPEN' SureWave™ touchless switch opens the door. The SureWave™ light ring turns red. Once inside and the door is closed, pressing the illuminated 'WAVE TO LOCK' SureWave™ touchless switch changes the color to red and locks the door. To exit, press the interior touchless switch to unlock the door and reset the system. The 'WAVE TO LOCK' SureWave™ switch illuminated ring turns green and the exterior 'WAVE TO OPEN' SureWave™ light ring turns green. If the door is opened manually to exit the restroom, the magnetic contact switch installed on the door resets the system.

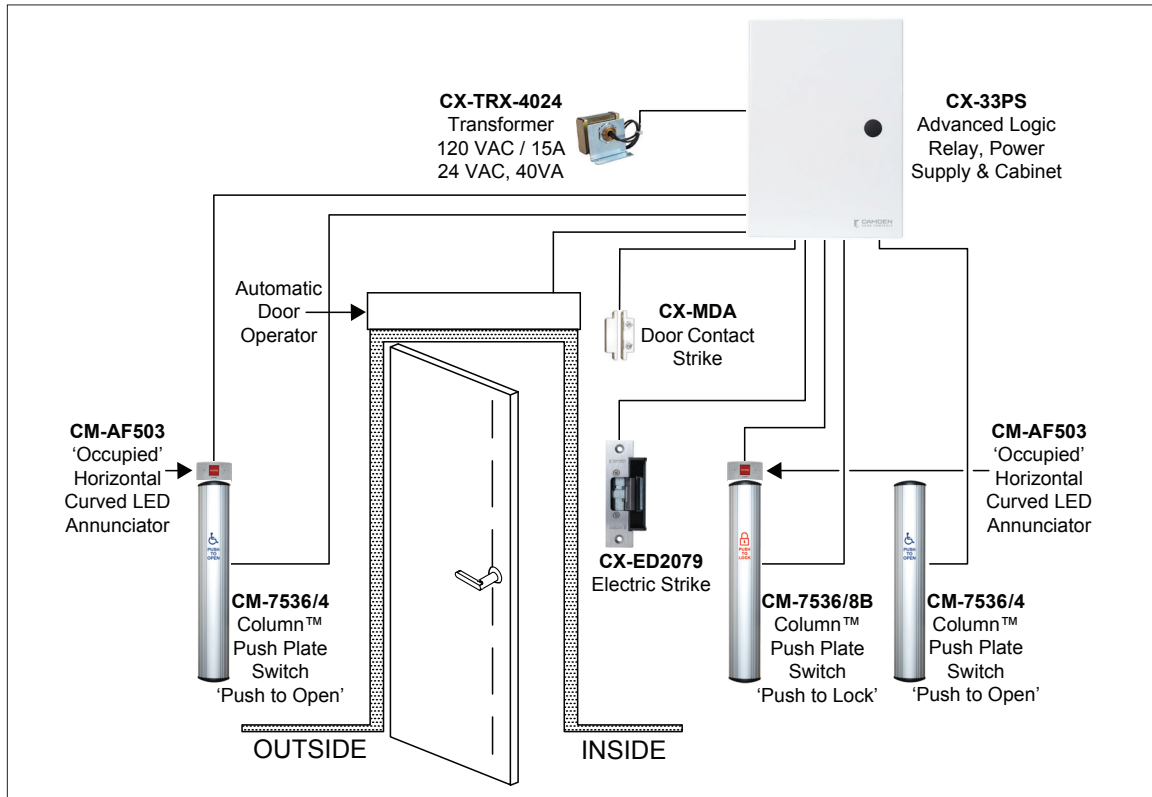
Camden CX-WC16FM-PS Restroom Control Kit Components:

CX-WC16FM-PS Series flush mounted kits include everything for a complete installation including: CX-33PS Control and Power Supply cabinet, CM-331/43S-SGLR single gang Illuminated Touchless Switch 'WAVE TO LOCK', CM-331/42SW-SGLR double gang Illuminated Touchless Switch 'WAVE TO OPEN' with Wheelchair symbol and sign, CM-325/42SW double gang Touchless Switch 'WAVE TO OPEN' with Wheelchair symbol, CX-MDA surface mount Magnetic Door Contact and CX-ED2079 Universal Grade 2 ANSI electric strike.



Column Switch™ Restroom System

• CX-WC17-PS



This is a control system with a pre-wired metal enclosure and power supply that allows access in and out of a restroom, with the ability to secure the door to make patrons aware that it is either occupied or vacant. The advanced relay controls the door operator, electric strikes, Column™ Switches and CM-AF503 Horizontal Annunciators.

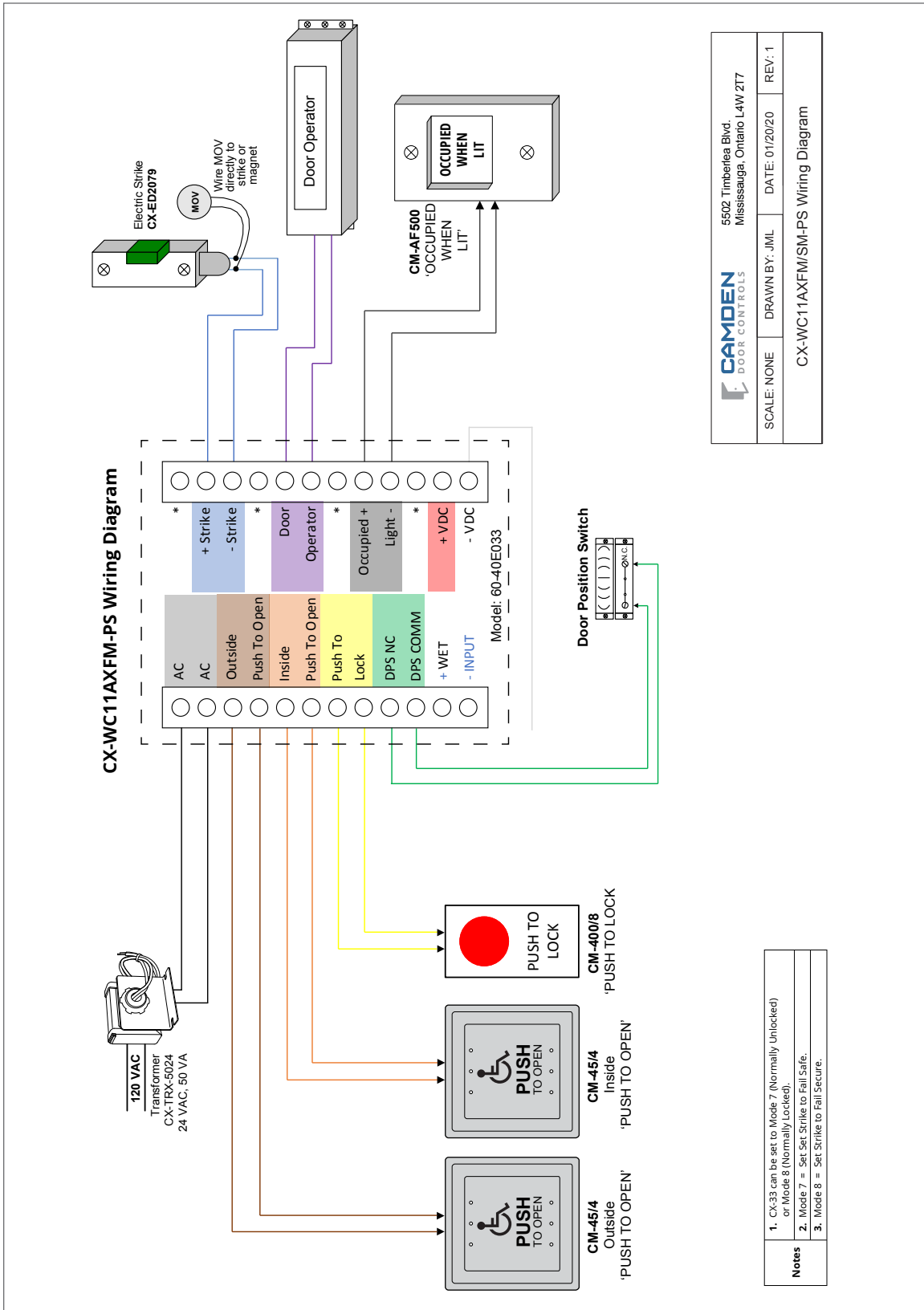
The door is normally closed. When the exterior 'PUSH TO OPEN' Column™ Switch is pressed, the door will swing open. When the interior 'PUSH TO LOCK' button is pressed, the door will lock and cause the 'OCCUPIED WHEN LIT' Annunciator to illuminate. The door is unlocked when 'PUSH TO OPEN' switch is pressed or by opening the door from the inside manually which breaks the door contact circuit, resets the system and unlocks the door. The Annunciator will then turn off, signalling that the restroom is now vacant.

Camden CX-WC17-PS Restroom Control Kit Components:

CX-WC17-PS Series Column™ Switch kits include everything for a complete installation including: CX-33PS Advanced Logic Relay with Power Supply, (2) CM-7536/4 'PUSH TO OPEN' Column™ Switches, CM-7536/8B 'PUSH TO LOCK' Column™ Switch, CM-AF503 'OCCUPIED' Horizontal Curved LED Annunciators, CX-MDA surface mount Magnetic Door Contacts and CX-ED2079 Universal Grade 2 ANSI electric strikes.

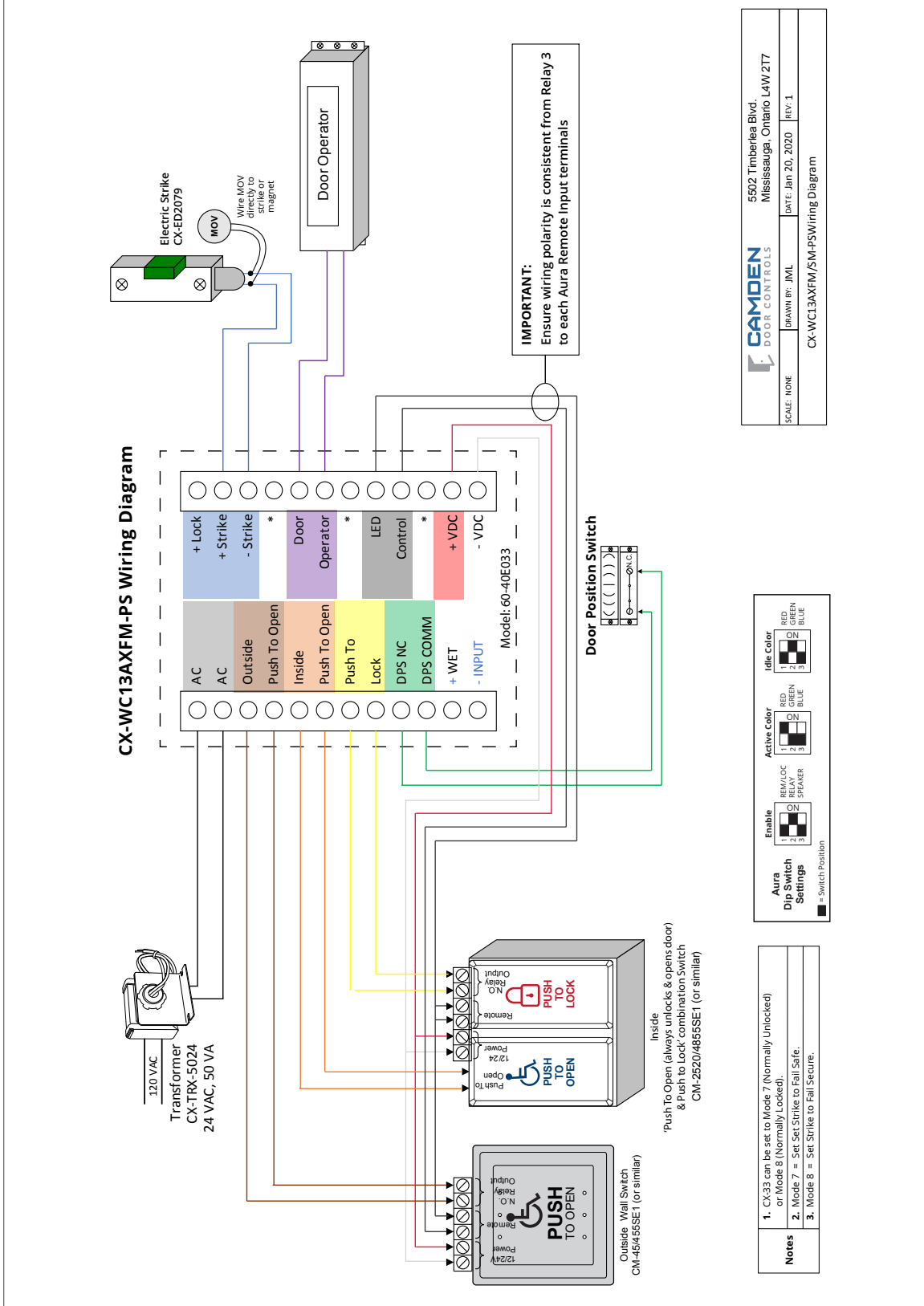
Point to Point Wiring Diagrams

This section provides point to point wiring diagrams for restroom control systems utilizing CX-33 and CX-EMF-2 control relays.



5502 Timberlea Blvd. Mississauga, Ontario L4W 2T7			
SCALE: NONE	DRAWN BY: JIML	DATE: 01/20/20	REV: 1
CX-WC11AXFM/SM-PS Wiring Diagram			



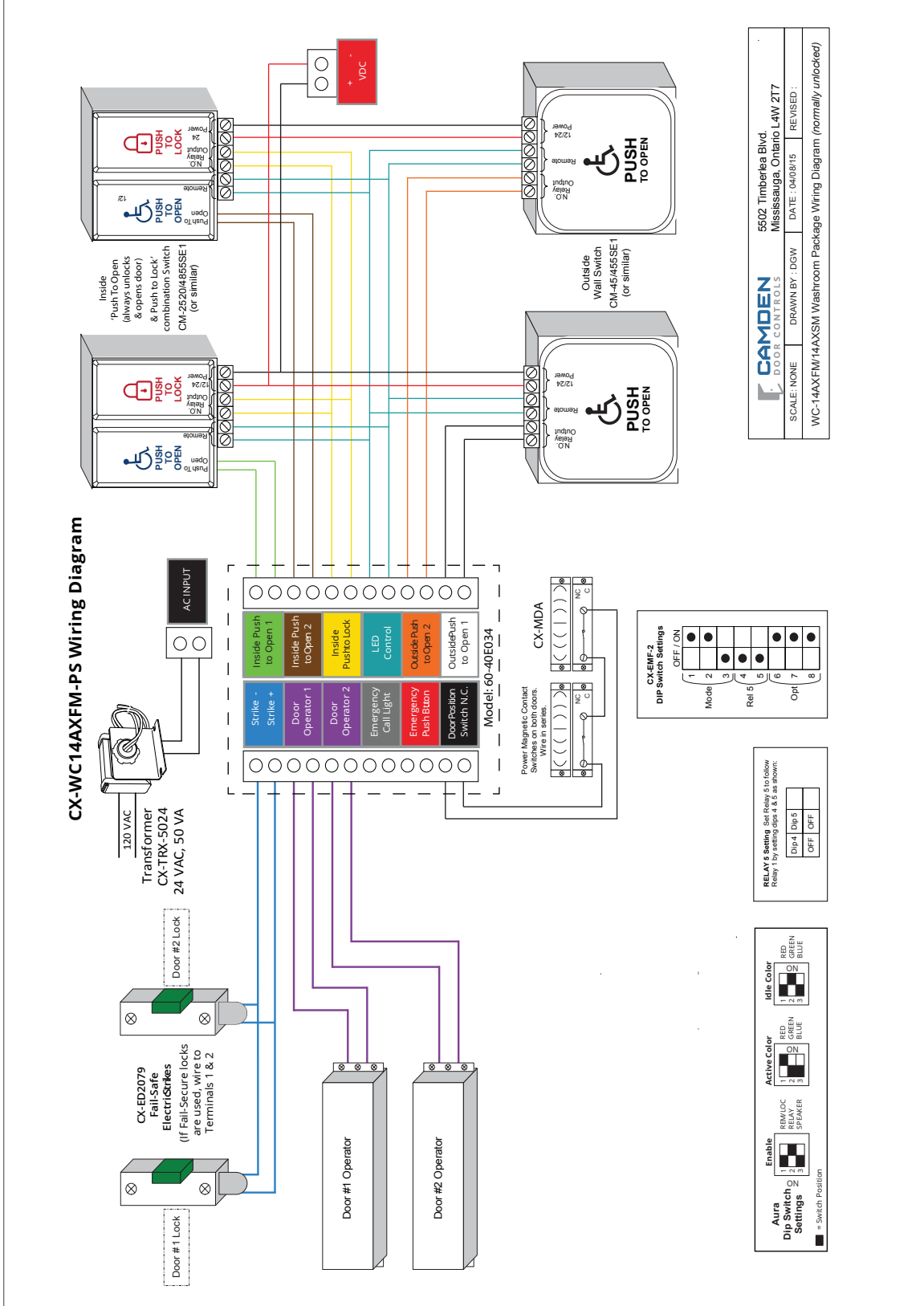


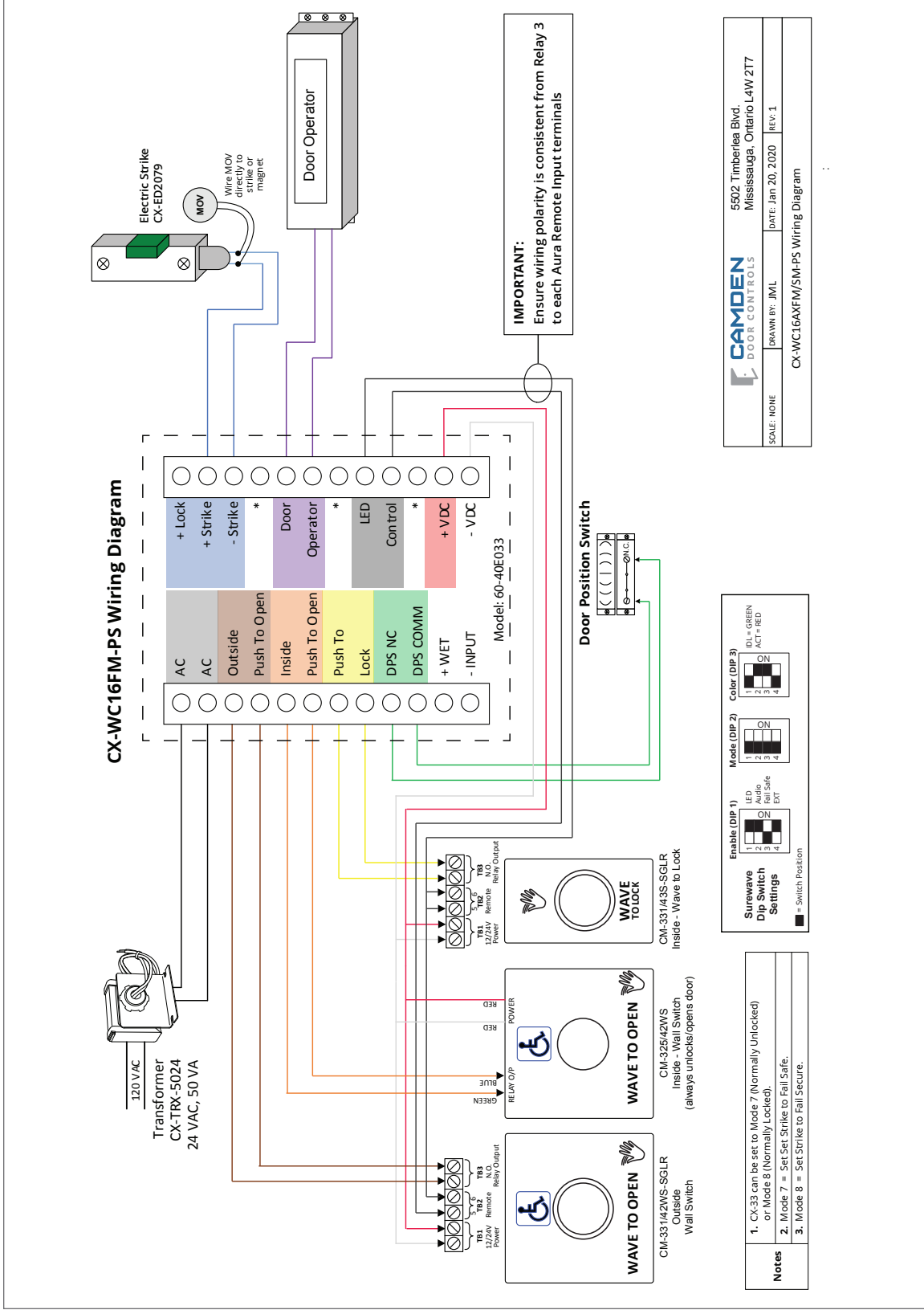
CAMDEN DOOR CONTROLS		5502 Timberlea Blvd. Mississauga, Ontario L4W 2T7	
SCALE: NONE	DRAWN BY: JML	DATE: Jan 20, 2020	REV: 1
CX-WC13AXFM/SM-PS Wiring Diagram			

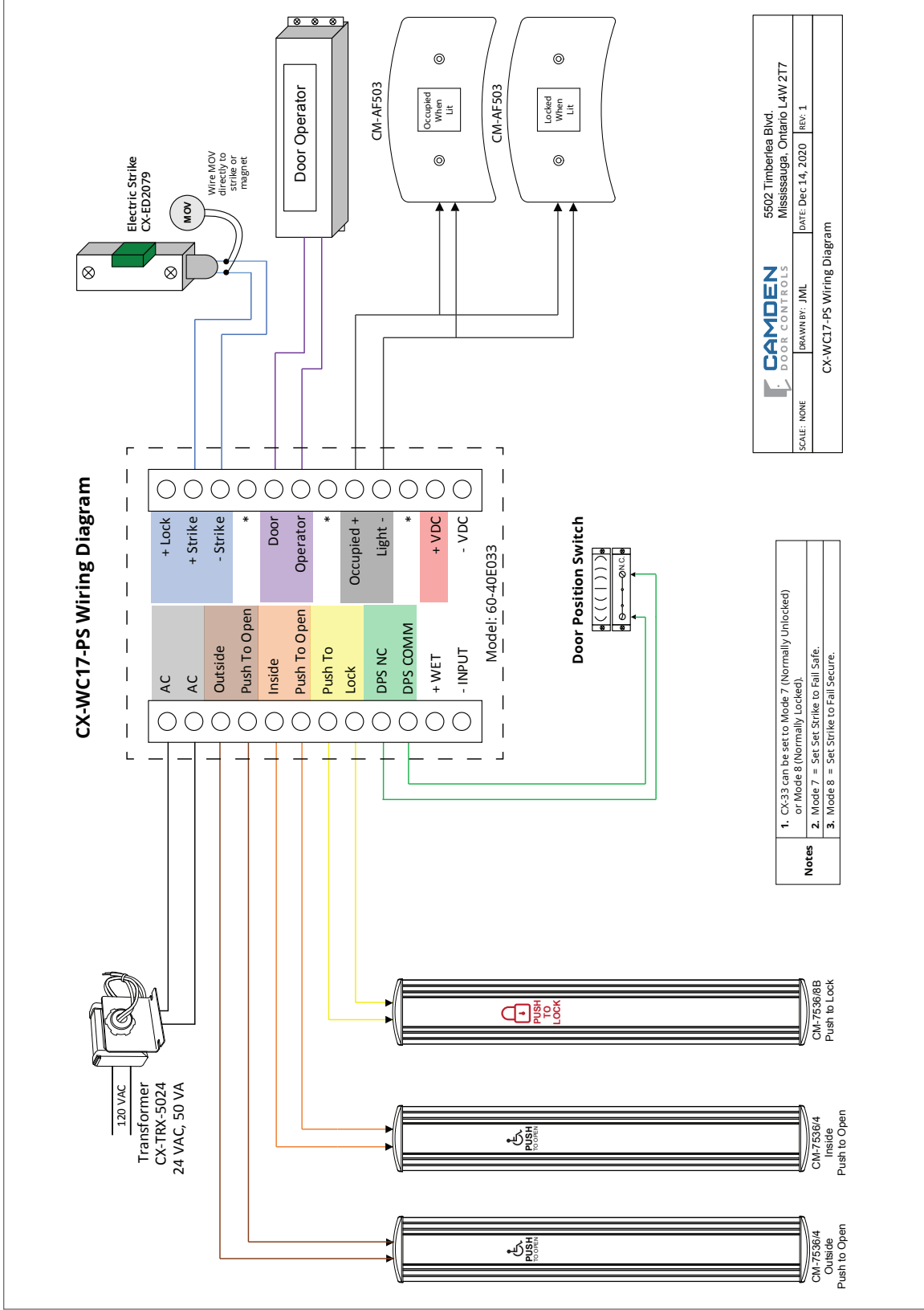
Enable	Rew/Loc Relay Spkr	Active Color	Idle Color
1 ON, 2 OFF, 3 OFF	1 ON, 2 OFF, 3 OFF	1 RED, 2 GREEN, 3 BLUE	1 RED, 2 GREEN, 3 BLUE

Legend: ■ = Switch Position

Notes	<ol style="list-style-type: none"> CX-33 can be set to Mode 7 (Normally Unlocked) or Mode 8 (Normally Locked). Mode 7 = Set Strike to Fall Safe. Mode 8 = Set Strike to Fall Secure.
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CX-WC17-PS Wiring Diagram





Project Specifications

Camden Door Controls offers a complete set of project specifications, in Word™ doc. format, for each restroom control system designs contained in this guide.

To obtain a copy, please visit www.camdencontrols.com or contact our Customer Service department at 1-877-226-3369.

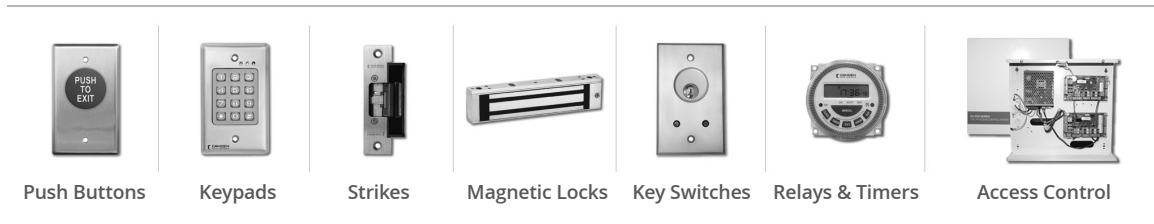
About Camden Controls

Camden Door Controls offers the most extensive range of high quality door activating, locking, and control products to support any automatic door operator or access control application.

We are ISO 9001:2015 registered, with a 20,000 ft. manufacturing facility, and an extensive network of stocking distributors across North America. Our 'Quick-Ship' warehouses in San Diego California and Charlotte NC, and main manufacturing facility in Toronto enables Camden to provide customers 5 day ground shipping to any location within the continental US!

Liability Statement

Camden Door Controls has created this guide to serve as a general orientation to the topic and assumes no liability whatsoever for errors or omissions in the information contained herein, nor in how this information is understood or interpreted. In all cases, the reader is directed to consult the applicable codes, standards and laws that are in force within the country, state and municipality of their installation, and are further advised to submit their interpretation of the installation requirements to their local authority having jurisdiction (AHJ) prior to purchasing or installing equipment.



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