When the interior WAVE TO LOCK touchless switch is activated it will trigger its N.O. relay contact to send a momentary closure to the CX-WC16PS to lock the Restroom and switch the SGLR light ring color from green to red. The inside WAVE TO OPEN N.O. relay contact. When activated will unlock the door and the door will swing open. The Restroom can also be unlocked by opening the door from the inside which will break the door contact causing the CX-WC16PS to reset and unlock the door. The SGLR light ring will switch back to green. The Restroom is now vacant.

Mounting

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

The CX-WC16PS cabinet should be mounted in a clean dry location out of direct contact with the elements.

**Wiring the CX-WC16PS Series Restroom Control Kit is as follows:**

The CX-WC16PS comes from Camden with the CX-33 pre-wired to a labeled set of two terminal strips. This will make the wiring of the WAVE TO OPEN/WAVE TO LOCK sensors 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 (WAVE TO OPEN) and PUSH TO LOCK (WAVE TO LOCK) sensors, 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), SGLR light ring (Relay3), and to provide VDC power for the door strike.

All SURE-WAVE devices can be powered with 12/24 VAC/VDC. **Note:** The SGLR option (light ring) must be installed before applying power to the sensor.

**Wiring the Outside WAVE TO OPEN Sensor**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-331/42WS-SGLR</td>
<td>Wire in power to the TB1 terminal block on the back lower left side (not polarity sensitive). On terminal block TB3, wire the common and normally open poles of the relay to Dry &amp; Input on the CX-33. The Remote terminal (TB2) will be wired in parallel with the Remote terminal of the Outside WAVE TO OPEN sensor. Then it’s wired to Relay 3 (common &amp; normally open) of the CX-33. Install the SGLR (light ring) circuit board on the front-face of the Outside WAVE TO OPEN sensor. Confirm the DIP switch settings using the legend below. Adjust the range accordingly with POT1 and POT2 for the desired activation time.</td>
</tr>
</tbody>
</table>

**Wiring the Inside WAVE TO OPEN Sensor**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM-325/42WS</td>
<td>Wire in power using the two red wires (not polarity sensitive). Next, connect the blue wire (normally open) and the green wire (common) to Dry2 &amp; Input on the CX-33. The range and the activation time can be adjusted from the front-face of the sensor. The range adjustment is on the top and the activation time is located on the bottom.</td>
</tr>
</tbody>
</table>

**Selecting a Mode**

The CX-WC16PS has two Restroom applications built in (Mode 7 & 8). The default mode for the CX-WC16PS is Mode 7 (normally unlocked).

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

There are three LED displays that will allow you to see what mode you have selected when advancing through the modes.

To change the mode of the CX-WC16PS simply press the MENU button once and use the UP button to advance to the desired mode.

**Editing the Settings for a Mode**

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

Once the option is selected you can use the “UP or DOWN” buttons to select the timing needed. The first option (H & 1 flashing) will be how long relay 1 will be activated for (0-50 seconds). The second option (d & 2 flashing) will be how long to wait before activating relay 2 (0-15 seconds). The third option (H & 2 flashing) will be how long relay 2 will be activated for (0-50 seconds). The fourth option (d & 2 flashing) will be how long to wait before activating relay 3 (0-15 seconds). The fifth option (H & 3 flashing) will be how long relay 3 will be activated for (0-50 seconds). See chart below.

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

To return the CX-33 back to its factory default settings you will need to remove power, then hold down the “MENU” button while powering up the CX-33.

Once started you will see the firmware version listed then a number “1” will be displayed. Reconnect your power and press the “MENU” button once then use the “UP” or “DOWN” button to advance to the desired mode.

Fully test the operation of the CX-WC16PS for proper functionality.
### Display (M)

<table>
<thead>
<tr>
<th>Description (Mode you are in)</th>
<th>Parameters (1-15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H, then 1 Relay 1 Hold Time</td>
<td>0.0 to 50 seconds</td>
</tr>
<tr>
<td>d, then 1 Relay 2 Delay Time</td>
<td>0.0 to 15 seconds</td>
</tr>
<tr>
<td>H, then 2 Relay 2 Hold Time</td>
<td>0.0 to 50 seconds</td>
</tr>
<tr>
<td>d, then 2 Relay 3 Delay Time</td>
<td>Depends on Mode</td>
</tr>
<tr>
<td>H, then 3 Relay 3 Hold Time</td>
<td>0.0 to 50 seconds</td>
</tr>
<tr>
<td>d</td>
<td>Sets the display ON or OFF during operating mode</td>
</tr>
<tr>
<td>A</td>
<td>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.</td>
</tr>
<tr>
<td>1</td>
<td>Set Dry Input 1 to activate on normally open or normally closed contact.</td>
</tr>
<tr>
<td>2</td>
<td>Set Dry Input 2 to activate on normally open or normally closed contact.</td>
</tr>
<tr>
<td>3</td>
<td>Set Dry Input 3 to activate on normally open or normally closed contact.</td>
</tr>
<tr>
<td>4</td>
<td>Set Dry Input 4 to activate on normally open or normally closed contact.</td>
</tr>
<tr>
<td>5</td>
<td>Set Wet Input 5 to activate on normally open or normally closed contact.</td>
</tr>
</tbody>
</table>

### Mounting

The Sure-Wave™ may be mounted in single or double gang electrical boxes, and 4 x 4 boxes.

NOTE: The sealing gasket (included) is recommended for outdoor or wet locations.

If using with Automatic doors install in accordance with ANSI A156.10 / A156.19. Select from one of the following mounting subsections:

1. **Single Gang Electrical Box Mount - CM-331/43S-SGLR**
   - a) If using an in-wall box ensure the box is plumb and square, and flush with the wall surface. (See Diagram 1)
   - b) If using a surface box, ensure it is secure & plumb.
   - 2. Bring your 4 or 6-conductor wire through the back or side of the enclosure and leave approximately 6” tail for wiring connection.
   - 3. Make the electrical connections to the device according to the wiring section.
   - 4. Using the dip switch located on the end of the unit, set the operating mode.
   - 5. Attach the unit to the enclosure using the two #6-32 screws provided.
   - 6. Apply power and adjust range and time delay via the potentiometers on the front of the unit.
   - 7. Attach the faceplate to the unit using the two black #6-32 x 1/2” machine screws or tamperproof screws.
   - NOTE: Do not overtighten!
   - 8. Apply the label as required.

### Diagrams

- **CM-331/43S-SGLR Surface Mount**
- **CM-331/43S-SGLR Flush Mount**
DOUBLE GANG ELECTRICAL BOX MOUNT - CM-331/42SW-SGLR * CM-325/42SW

1. a) If using an in-wall box ensure the box is plumb and square, and flush with the wall surface.
   b) If using a surface box, ensure it is secure & plumb.
   c) If using a 4 x 4 box, ensure the box is plumb and square, and flush with the wall surface, then attach the metal adaptor plate (included in the packages) to the box using appropriate fasteners.
2. Bring your 4 or 6-conductor wire through the back or side of the enclosure and leave approximately 6" tail for wiring connection.
3. Make the electrical connections to the device according to the wiring section.
4. Using the dip switch located on the end of the unit, set the operating mode.
5. Attach the unit to the enclosure using the two #6-32 screws provided.
6. Apply power and adjust range and time delay via the potentiometers on the front of the unit.
7. Attach the faceplate to the unit using the two black #6-32 x 1/2" machine screws or tamperproof screws.
   NOTE: Do not overtighten!
8. Apply the label as required (only for the CM-331/42SW-SGLR).

IN-WALL MOUNTING

Proper Mounting

Improper Mounting

CM-331/42SW-SGLR & CM-325/42SW Flush Mount

SUREWAVE ASSEMBLY

CM-331/42SW-SGLR
CM-325/42SW Sealing Gasket

#6-32 x 3/4" (2 Pcs)
Polypropylene Lens Holder Set

CM-331/43S Faceplate
CM-331/42SW-SGLR CM-325/42SW Faceplate

CM-331/43S Sealing Gasket

IR Lens

Surface Mount Enclosure
**CX-ED2079 'Universal' Electric Strike Installation**

1. Prepare the door jamb as per the appropriate drawing.
2. Install mounting brackets to jamb using M5x12 screws and pressed metal nuts. Do not tighten.
3. Spacers are used to assure flush final assembly of faceplate into jamb. Add one of more spacers between jamb and mounting bracket when faceplate extends beyond the jamb. When the faceplate sits inside the jamb, spacers must be added between the mounting bracket & the lip bracket. Make sure clearance hole in spacer aligns with hole in mounting bracket.
4. Connect wires coming from the low voltage side of the transformer to wires (black) from strike.
5. Install electric strike jamb by attaching with #10-32 screws and lockwashers.
6. Secure M5x12 screws holding mounting brackets to jamb.

---

**Connections**

**Power**
- 12VDC: Red/Black: +12V, Blue/Green: Ground
- 24VDC: Red: +24V, Black/Blue: -

A varistor is provided to protect/prevent strike from spikes. Connect varistor between input wires.

**Operations**

How to modify fail-safe to fail-secure or vice versa.
1. Loosen the screw as per the product diagram below.
2. Rotate the set plate 180° and slide the plate until it is properly seated.
3. Tighten the screw.

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

<table>
<thead>
<tr>
<th>Item</th>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60-31A008</td>
<td>Line Powered Surewave, 1 Relay for CM-331/43S-SGLR &amp; CM-331/42SW-SGLR</td>
</tr>
<tr>
<td></td>
<td>60-31A006</td>
<td>Touchless IR Sensor Short Range for CM-325/42SW</td>
</tr>
<tr>
<td>2</td>
<td>60-40E033</td>
<td>Advanced Logic Control Relay and 2 Amp Power Supply in pre-wired metal cabinet</td>
</tr>
<tr>
<td>3</td>
<td>CX-MDA</td>
<td>Magnetic Door Contact</td>
</tr>
<tr>
<td>4</td>
<td>60-81C024</td>
<td>English Self-Adhesive Vinyl Sign “WAIT FOR DOOR TO CLOSE”</td>
</tr>
<tr>
<td></td>
<td>CM-331/43S-SGLR</td>
<td>Single Gang SureWave Label</td>
</tr>
<tr>
<td>5</td>
<td>60-81C010</td>
<td>Decal Print English Label “LOCKED WHEN RED/UNLOCKED WHEN GREEN”</td>
</tr>
<tr>
<td>6</td>
<td>60-81C010F</td>
<td>Decal Print French Label “PORTE BARRÉE/PORTE DÉBARRÉE”</td>
</tr>
<tr>
<td>7</td>
<td>60-81C010FE</td>
<td>Decal Print English &amp; French Sign “WAIT FOR DOOR TO CLOSE”</td>
</tr>
<tr>
<td>8</td>
<td>60-81C011</td>
<td>Decal Print English Sign “OCCUPIED WHEN RED VACANT WHEN GREEN”</td>
</tr>
<tr>
<td></td>
<td>CM-34BL</td>
<td>Single Gang SureWave Enclosure</td>
</tr>
<tr>
<td></td>
<td>CM-34AL</td>
<td>Single Gang Aluminum Box, Surface mount 2-7/8’’ W x 4-5/8’’ H x 1-3/4’’ D (73mm x 117mm x 44mm)</td>
</tr>
<tr>
<td></td>
<td>CM-34D</td>
<td>Single Gang, Extra Deep heavy-duty grey polymer 2-3/4’’ W x 4-1/2’’ H x 3’’ D (70mm x 114mm x 76mm)</td>
</tr>
<tr>
<td>9</td>
<td>CM-34C</td>
<td>Double Gang SureWave Label</td>
</tr>
<tr>
<td>10</td>
<td>60-81C012</td>
<td>Decal Print English Label “OCCUPIED WHEN RED/VACANT WHEN GREEN”</td>
</tr>
<tr>
<td>11</td>
<td>60-81C012F</td>
<td>Decal Print French Label “PORTE BARRÉE/PORTE DÉBARRÉE”</td>
</tr>
<tr>
<td>12</td>
<td>60-81C012FE</td>
<td>Decal Print English &amp; French Label “OCCUPE QUAND ROUGE LIBRE QUAND VERT” &amp; “OCCUPIED WHEN RED VACANT WHEN GREEN”</td>
</tr>
</tbody>
</table>

**Notes:**

1.  
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26.  

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

Place Sign On The Door Inside The Restroom At Eye Level

INSIDE THE RESTROOM

Indicator on switch will turn red when door is locked.

USE "WAVE TO LOCK" SWITCH TO LOCK THIS DOOR
WAIT FOR DOOR TO CLOSE

40-81C024

LOCKED WHEN RED
UNLOCKED WHEN GREEN

WAVE TO OPEN

WAVE TO LOCK
**WC16PS SERIES RESTROOM CONTROL**

**INSTALLATION INSTRUCTIONS**

---

**120 VAC**

Transformer
CX-TRX-5024
24 VAC, 50 VA

---

**Door Position Switch**

**Transformer**
CX-TX-5024
24 VAC, 50 VA

---

**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.

---

**Aura Dip Switch Settings**

<table>
<thead>
<tr>
<th>Enable</th>
<th>Active Color</th>
<th>Idle Color</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RED</td>
<td>RED</td>
</tr>
<tr>
<td></td>
<td>GREEN</td>
<td>GREEN</td>
</tr>
<tr>
<td></td>
<td>BLUE</td>
<td>BLUE</td>
</tr>
</tbody>
</table>

---

**IMPORTANT:**

Ensure wiring polarity is consistent from Relay 3 to each Aura Remote Input terminals.

---

**CX-WC13AXFM-PS Wiring Diagram with CX-WEC10-K2 Integration**

---

**Electric Strike**
CX-ED2079

---

**Wire MOV**
directly to strike or magnet

---

**Connect directly to DPS if no Emergency Call System is installed**

---

**CM-AF40SO**

**CM-AF40SO**

---

**CM-AF141SO**

---

**CX-WC13AXFM-PS**

---

**CX-WC10-K2**

---

**Emergency Call System Wiring**

---

**CX-WC13AXFM/SM-PS & CX-WEC10K2 Wiring Diagram**

---

**Aura**

---

**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.

---

**Enable**

<table>
<thead>
<tr>
<th>Switch Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
</tr>
<tr>
<td>GREEN</td>
</tr>
</tbody>
</table>

---

**CX-WC13AXFM/SM-PS**

---

**CX-WC10-K2**

---

**NOTE:**

Ensure wiring polarity is consistent from Relay 3 to each Aura Remote Input terminals.

---

**FILENAME:**

**DRAWN BY:**

**REV:**

**DATE:**

CAMDEN DOOR CONTROLS

5502 Timberlea Blvd
Mississauga, Ontario
L4W 2T7

JML Jan 20, 2020 1

---

**SCALE:**

**DRAWING No:**

**FILENAME:**