CM-7436VR
Column Switch with Sensor
INSTALLATION INSTRUCTIONS

CM-7436VR

1. DESCRIPTION

Camden CM-7436VR Series Hands-Free Column™ switches uses active infra-red microburst sensor technology, designed for use in ADA compliant automatic door control applications and access control. The switches eliminate the spread of germs by avoiding physical contact and provide greater convenience when moving through the premises. All models are ROHS compliant with lead-free construction. Built-in remote LED switching allows for integration with third-party applications, such as guard and nurse station annunciators. Adjustable time delay from 0.5 to 20 seconds and an adjustable range from (2" to 8" / 5cm to 20cm).

The CM-7436VR Series Hands-Free Column™ switches may be mounted to any flat wall surface, or to our Model CM-42 or CM-48 anodized aluminum or stainless-steel bollards. We provide necessary mounting hardware for all options.

2. SPECIFICATIONS

Voltage	12 to 24 VDC +/- 10%
Current	45 mA (peak)
Contact Rating	1 Amp @ 30 VDC
Contacts	Common/ N.O./ N.C.
Temperature Range	14F to 122F (-10 to 50 °C)
Response Time	10ms
Contruction	Heavy duty extruded aluminum
Finish	Anodized clear, dark bronze or stainless steel
Mounting	4 x #14 wood screws or 1/4"-20 S/S machine screws with anchors
Dimensions	37 -1/2" H x 4-1/2" W x 1-3/4" D (overall)

NOTE: Do NOT use AC Voltage for this unit.
Please see section 8 for power requirements

3. FEATURES

- Built-in Red and Green LED indication.
  Factory default = Red (Standby), Green (Triggered)

- Red and Green LEDs can be controlled by sensor or externally

- Adjustable detecting distance: 2 to 8 Inches (5 cm to 20 cm)

- Adjustable Time Delay: 0.5 seconds to 20 seconds

- Toggle function selection available

- IP65 rating

- IR lens to provide stable and reliable operation

4. OPERATION AT A GLANCE

In a typical application, as you approach the CM-7436VR, the LED will be red. When you wave your hand in front it will change the LED to green, and trigger its relay to change state and unlock your door, or trigger the door operator to open the door. The toggle feature can be used to trigger the door to remain in the unlocked position, until you wave your hand a second time to relock it.

5. CONFIGURING THE CM-7436VR

Range of Detection and Output Duration

Looking at the back of the CM-7436VR 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.
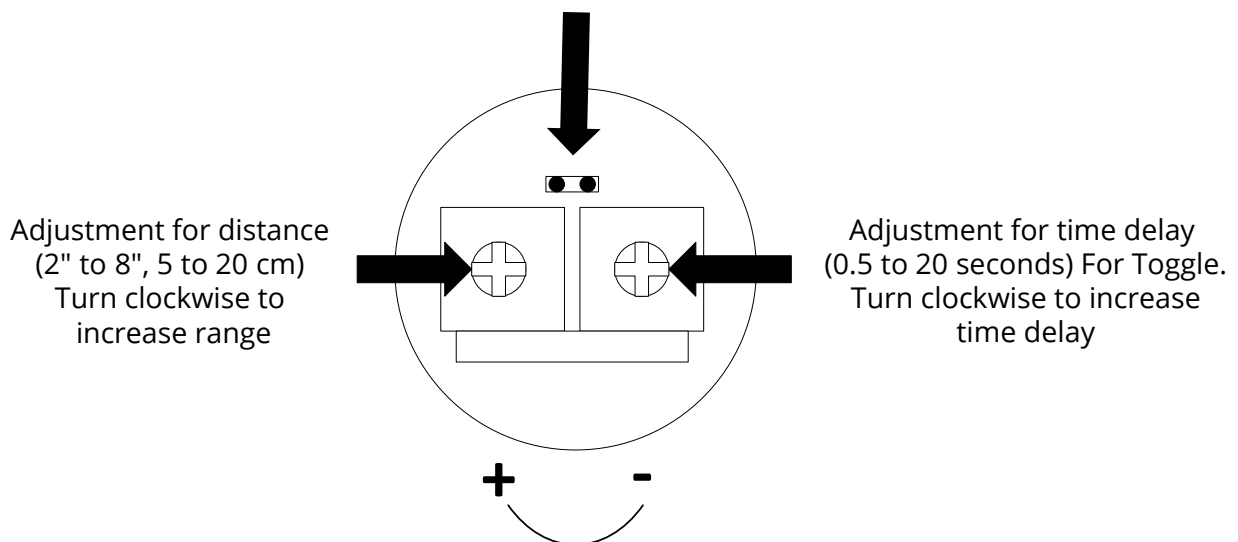
Remote LED Switching

The CM-7436VR 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.
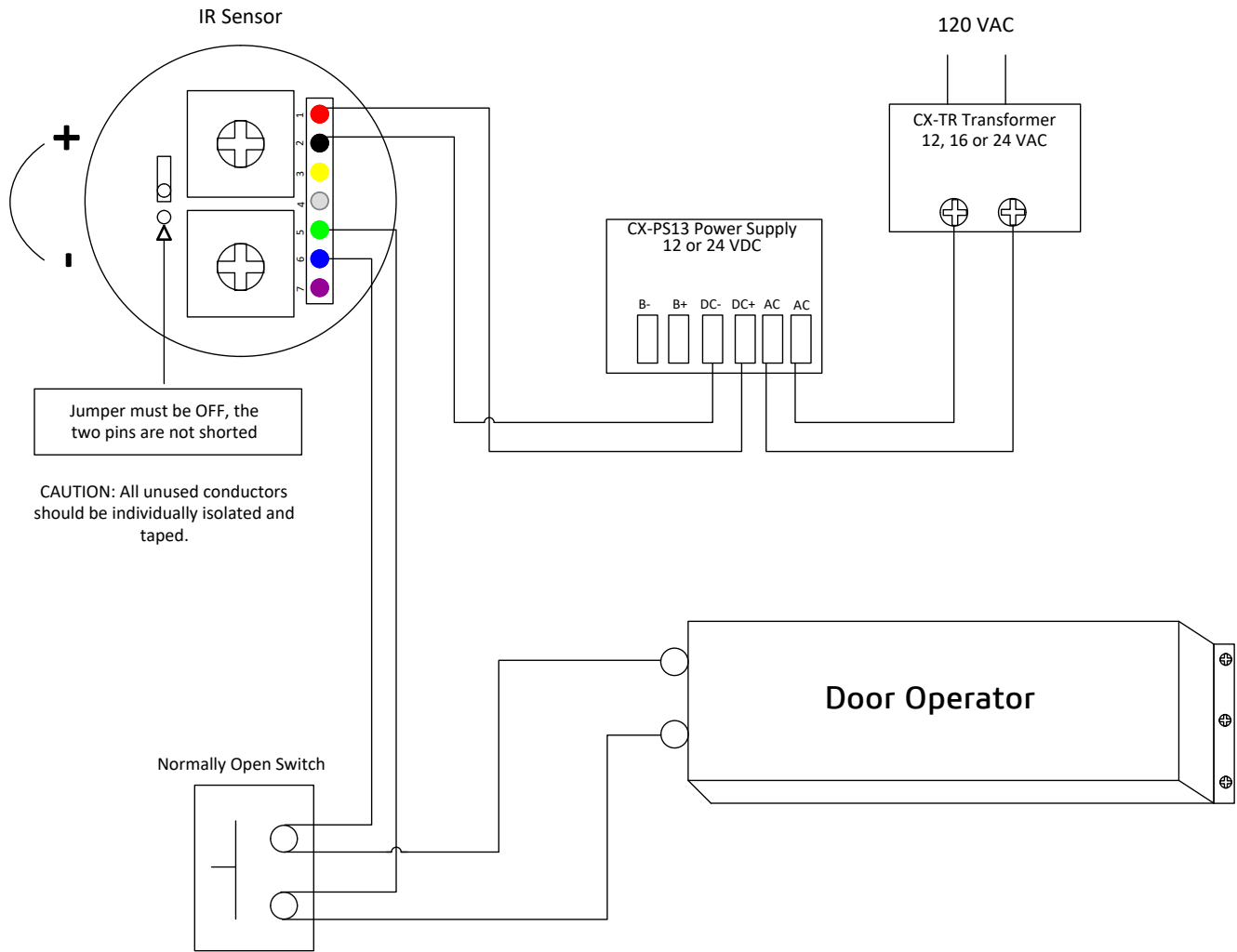
MODE PINS:
OPEN (Default position)=
Internal mode where the LED
colours will be controlled by
the IR sensor.
SHORTED = External mode
where the LED colours will be
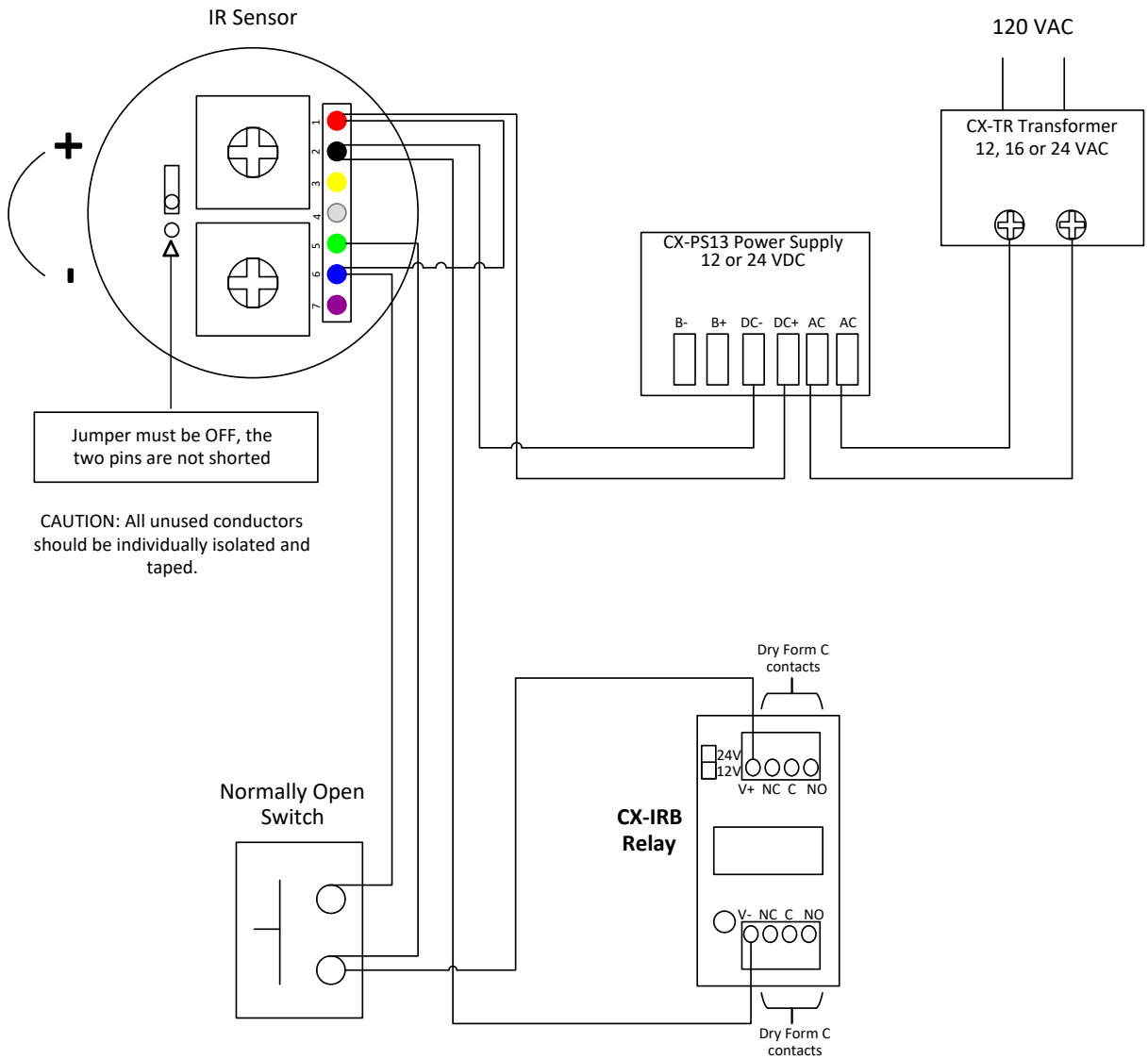controlled by Yellow and
White wires.

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

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

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6. WIRING THE CM-7436VR

The CM-7436VR Touchless Column Switch connected to Door Operator

IR Sensor

120 VAC

CX-TR Transformer
12, 16 or 24 VAC

CX-PS13 Power Supply
12 or 24 VDC

B- B+ DC- DC+ AC AC

+

-

Jumper must be OFF, the
two pins are not shorted

CAUTION: All unused conductors
should be individually isolated and
taped.

Door Operator

Normally Open Switch

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

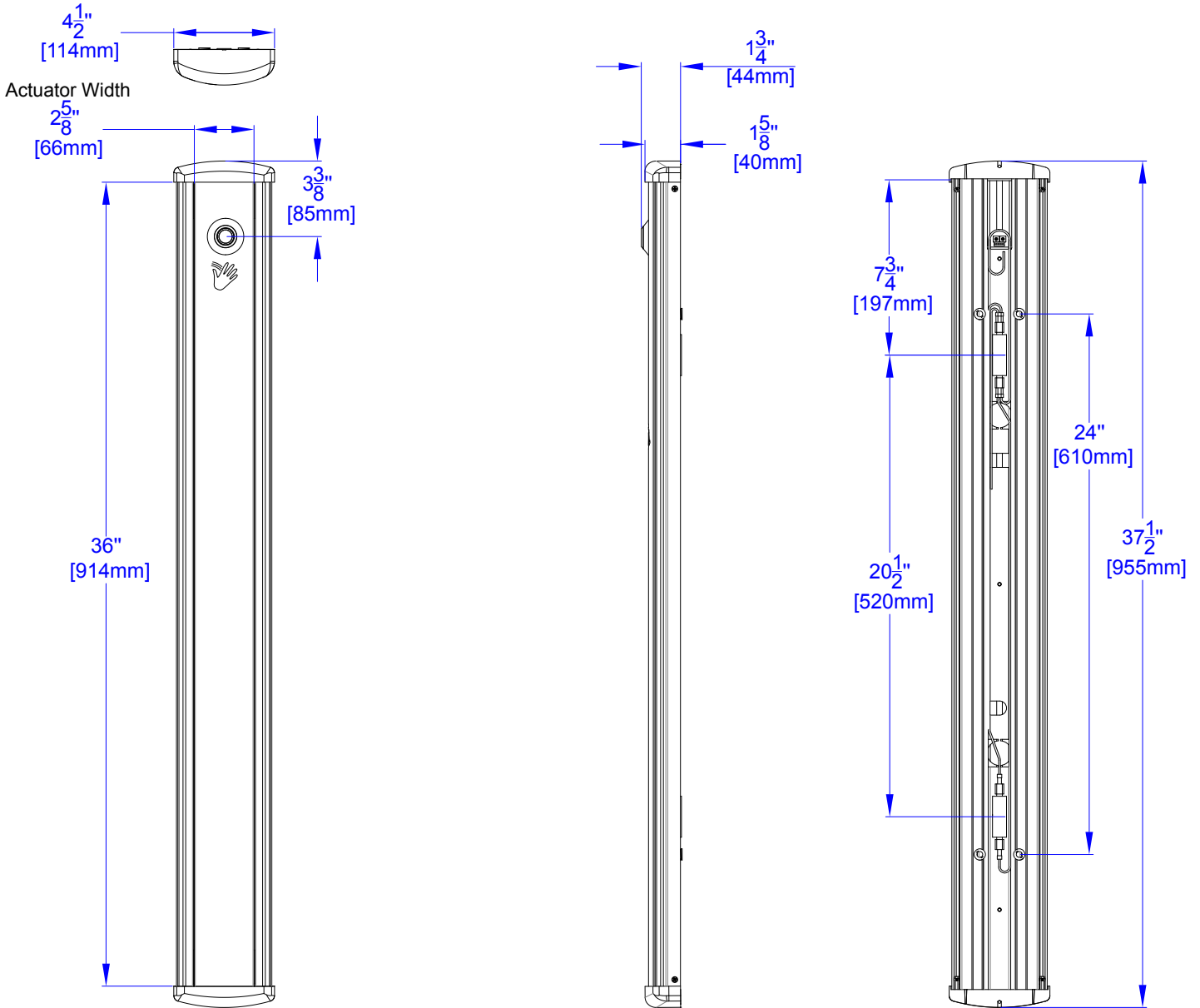## CM-7436VR Touchless Column Switch connected to DPDT Relay

IR Sensor

120 VAC

CX-TR Transformer
12, 16 or 24 VAC

CX-PS13 Power Supply
12 or 24 VDC

B- B+ DC- DC+ AC AC

+

-

Jumper must be OFF, the
two pins are not shorted

CAUTION: All unused conductors
should be individually isolated and
taped.

Dry Form C
contacts

24V
12V V+ NC C NO

Normally Open
Switch

**CX-IRB
Relay**

V- NC C NO

Dry Form C
contacts

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

7. POWER

The CM-7436VR 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-7436VR Hands-Free Column™ switch at any time.

Note: A linear output VDC power supply is strongly recommended. If using power from other than Camden's CX-PS13 filtered regulated power supply, you must measure the provided power before applying power to the CM-7436VR Hands-Free Column™ switch. Voltages of more than 10% over the specified acceptable range or using a power supply with large amounts of AC voltage on it (unfiltered unregulated power such as a transformer and a rectifier) may damage the CM-7436VR Hands-Free Column™ switch and void the warranty.
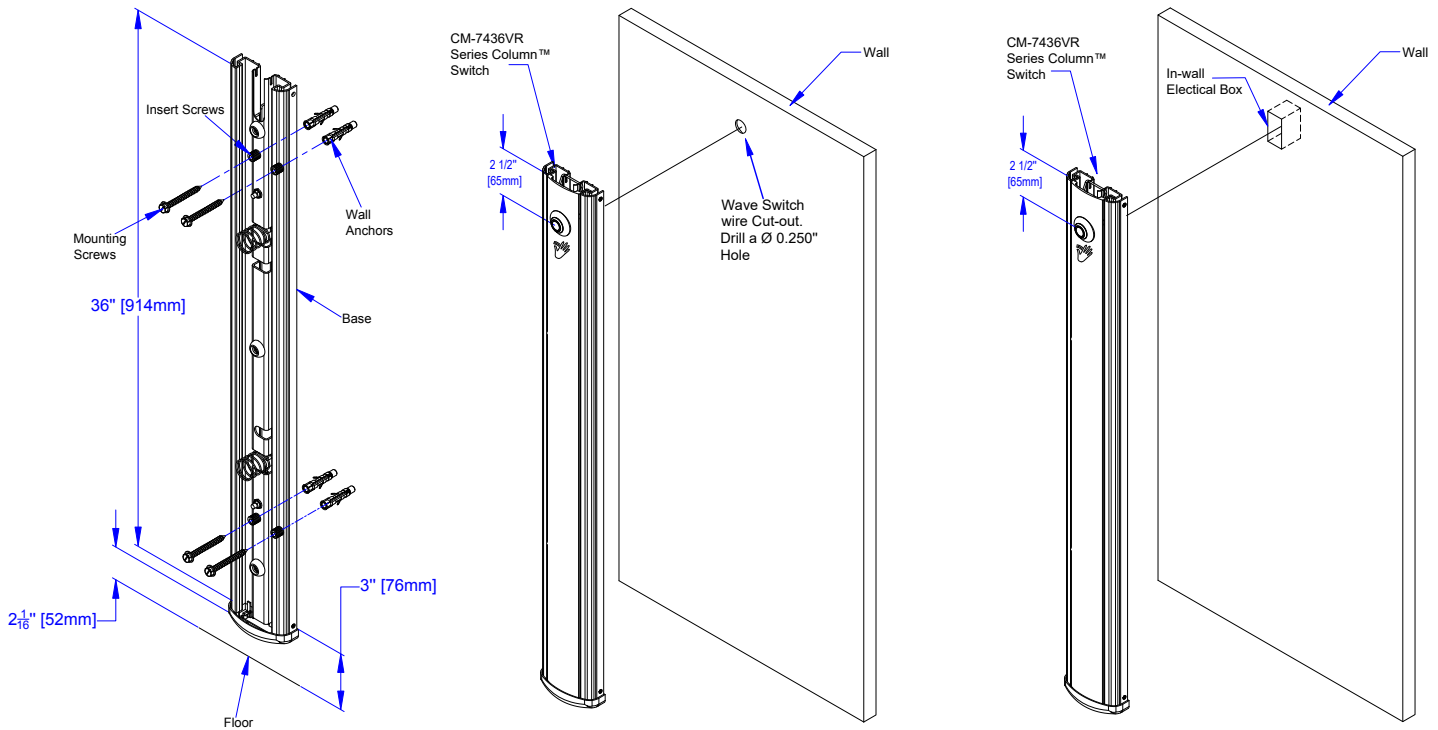
8. INSTALLATION

Code Requirements: If installed according to these instructions the CM-7436VR 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.

Installation Steps:

1. Remove the assembled unit from packaging. The unit must be disassembled to be installed. To do this, remove the two small Phillips screws holding the top cap in place. Remove the cap. Then, grasping the center (metal) actuation bar, pull vertically until the entire actuation bar is removed from the base unit. Set the actuation bar aside and protect from surface damage.

2. Determine the optimum height from the finished floor. See illustration (above) for common height. If utilizing an in-wall electrical box, center the touchless switch over the box for wire connection, while lining up the top edge with your mark.

If mounting without an in-wall electrical box, drill a Ø 0.250"hole for wire connection.

3. Using a level, ensure the base unit is plumb and level, and mark the 4 mounting locations through the adjustable nylon inset screws onto the wall surface (if on drywall use a pencil, and if on concrete a narrow Sharpie or similar).

4. a) Drill the wall at the 4 marked locations and tap in the appropriate wall plugs. We supply both drywall and concrete anchors for the included #14 screws.

4. b) If mounting the Column Switch to an aluminum post or framing section, drill and tap 4 holes for 1/4"-20 Stainless Steel Machine screws (also provided). Note: Camden CM-42 and CM-48 series posts are available with pre-drilled and tapped holes preparation for Column™ switches.

9. SYSTEM INSPECTION:

After the Installation and operational check of the system:

1. Place any applicable labels on the door (as per ANSI A156.10 or A156.19 guidelines).

2. Instruct the owner on door system operation and how to test it. This should be checked on a daily basis.

3. Strongly recommend to the owner that the complete entry be inspected twice a year as part of the service agreement.