# )))(((( cellgate®

## DIRECTORY · ACCESS CODE · RECEPTIONIST · GUEST QR CODE

# WATCHMAN®
# WXL

**WXL Pedestal and Flush Mount**

# Quick Install Guide

**AA1XLPE ATT, AA1XLPE VZN, AA1XLPE INT, AA1XLPE VPN**

**AA1XLSM ATT, AA1XLSM VZN, AA1XLSM INT, AA1XLSM VPN**

CellGate Support: 972-231-1999, opt. 3

## Items Included in Kit

The following items are included in your WXL delivery.

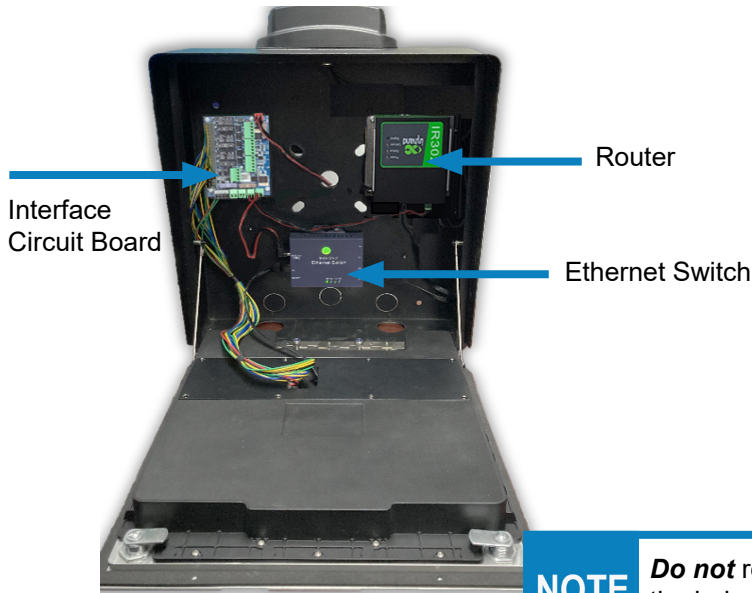1. Watchman XL Unit
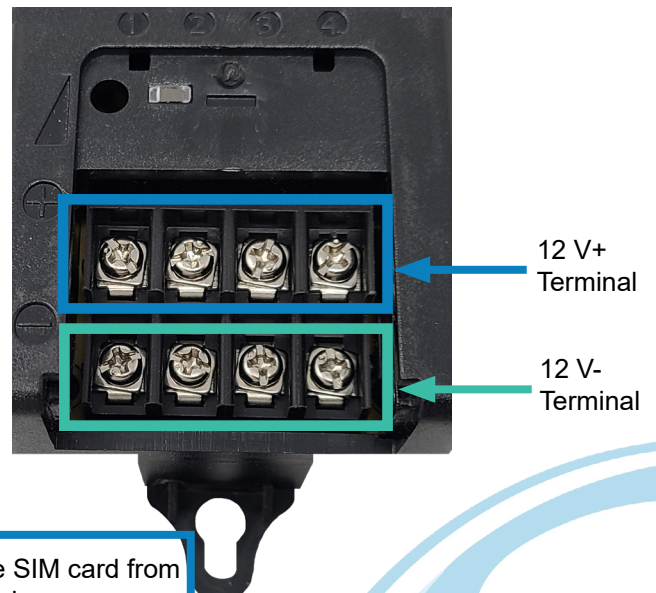2. 12 Volt DC Power Supply
3. Magnetic Read Switch
4. Keys

5. Nuts **X 4**
6. Bolts **X 4**
7. Install Guide
8. Customer Information Packet

> **NOTE** Leave one key with the customer.

## Wiring Examples

### Watchman XL Unit



Router

Interface Circuit Board

Ethernet Switch
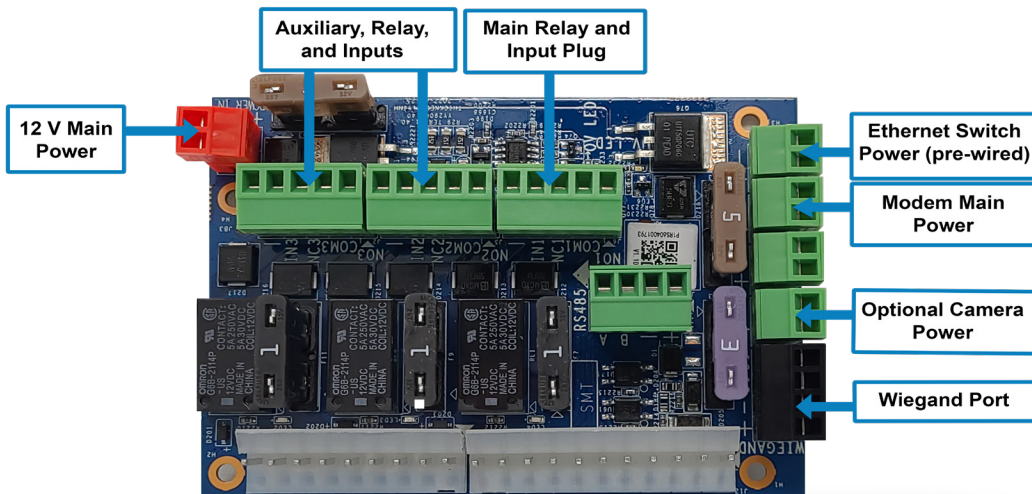
### Power Supply Wiring



12 V+ Terminal

12 V- Terminal

> **NOTE** **Do not** remove SIM card from the in-hand modem.

> ⚠ **Recommended wiring:** 18/6 shielded for main device, and 18/4 shielded for optional Wiegand devices.

## Interface Circuit Board



Auxiliary, Relay, and Inputs

Main Relay and Input Plug

12 V Main Power

Ethernet Switch Power (pre-wired)

Modem Main Power

Optional Camera Power

Wiegand Port

If you requested an expansion board, we installed it.

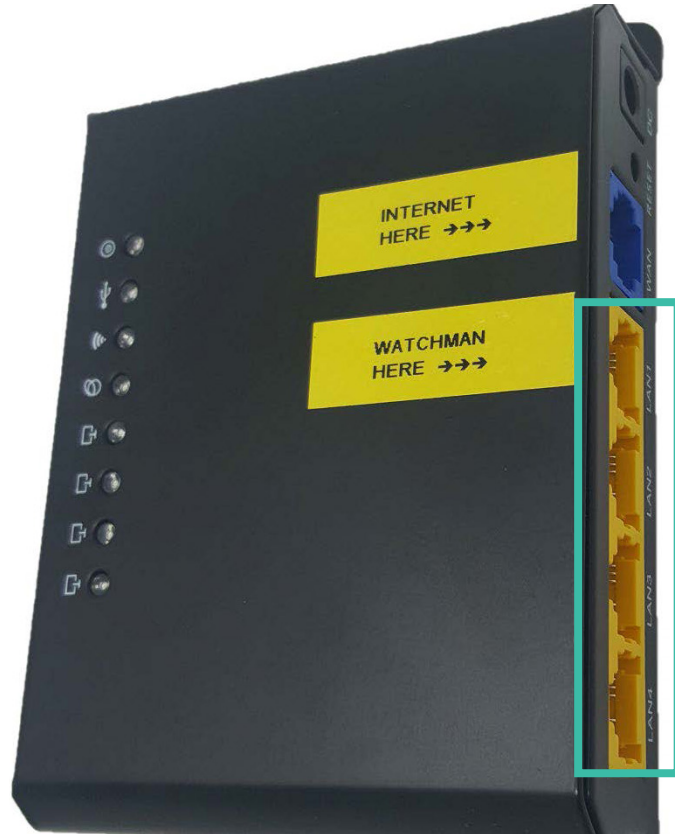We recommend the following gauges (ga) for each distance:

- 18 ga stranded: up to 25 ft
- 16 ga stranded: up to 50 ft
- 12 ga stranded: up to 60 ft

## Internet Router Connection

**Product Numbers:** AA1XLPE INT, AA1XLSM INT



| NOTE | Router supports external camera. |

← Plug customer Internet into the blue port

← Plug Watchman into any yellow port

← Plug optional external cameras into any yellow port

## VPN Connection

**Product Numbers:** AA1XLPE VPN, AA1XLSM VPN

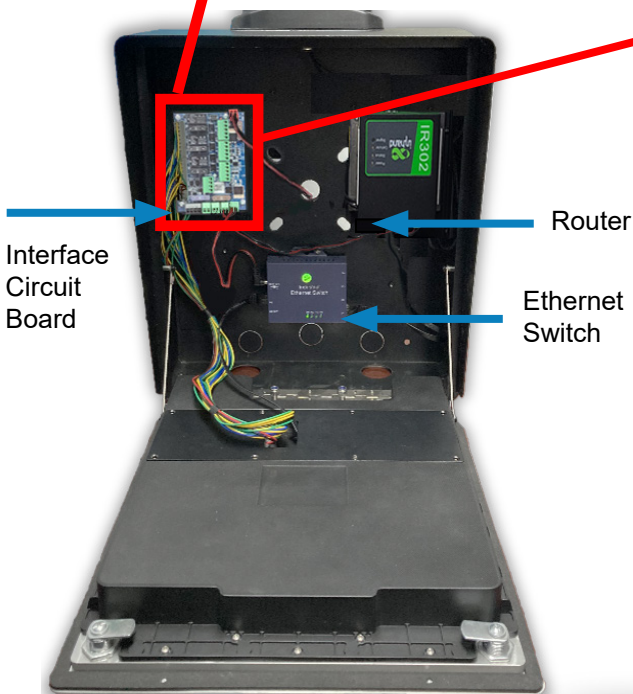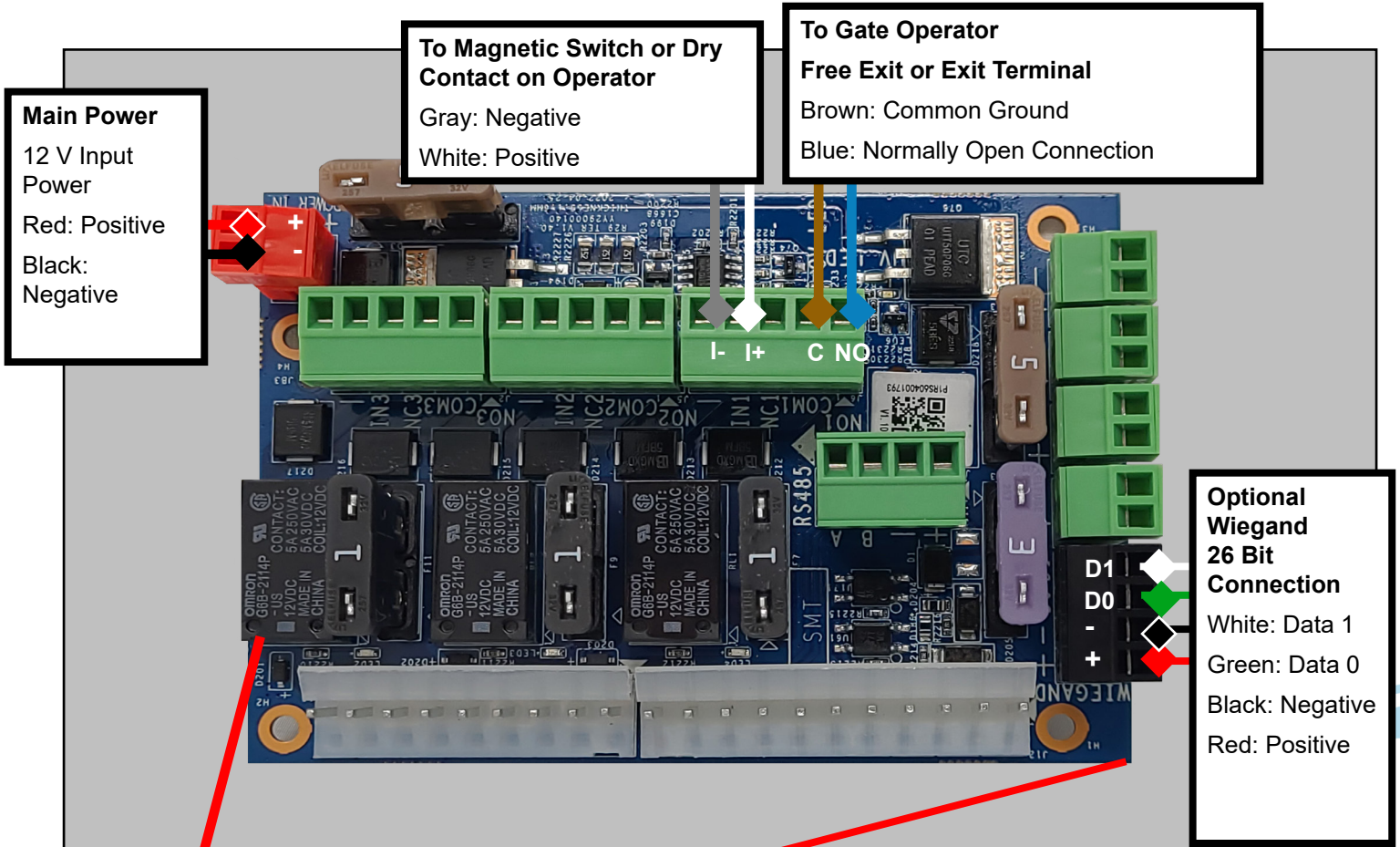The VPN connection ships DHCP enabled and ***does not*** support external cameras.

In the image to the left, the black chord is the Ethernet connection.



| NOTE | VPN ***does not*** support external camera. |

# Interface Wiring Diagram
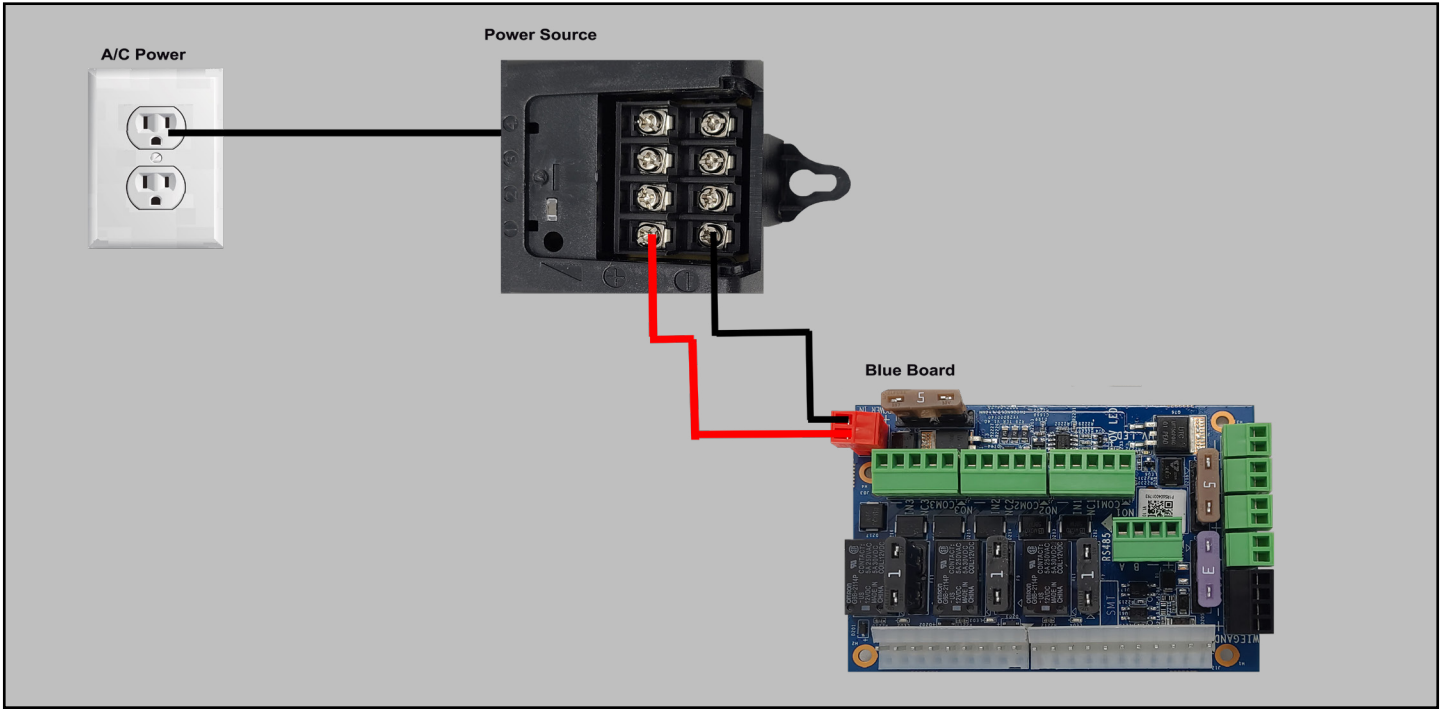## Oriented the same as the Watchman install

**To Magnetic Switch or Dry Contact on Operator**

Gray: Negative

White: Positive

**To Gate Operator**

**Free Exit or Exit Terminal**

Brown: Common Ground

Blue: Normally Open Connection

**Main Power**

12 V Input Power

Red: Positive

Black: Negative

**Optional Wiegand 26 Bit Connection**

White: Data 1

Green: Data 0

Black: Negative

Red: Positive

Interface Circuit Board

Router

Ethernet Switch

# 6-Wire Instructions - Power and Gate Operator

1. Wire main power from the transformer to the power connector on the circuit board.

2. Connect gate trigger wires from the Normally Open (NO) and Common (C) to the free-exit or exit terminals on the gate operator.

3. Connect the gate status wires on the 6-pin connector on the main relay and input plug to the magnetic switch or a Dry Contact, Normally Closed (NC) relay on the gate operator.

4. If using an optional 26-bit reader (keypad, card reader, RFID, or clicker), wire the device to the Wiegand connection on the interface circuit board.

5. Use Camera Guide if adding optional external camera.

6. Test/activate using the test credentials on the Activation & Test Process document.
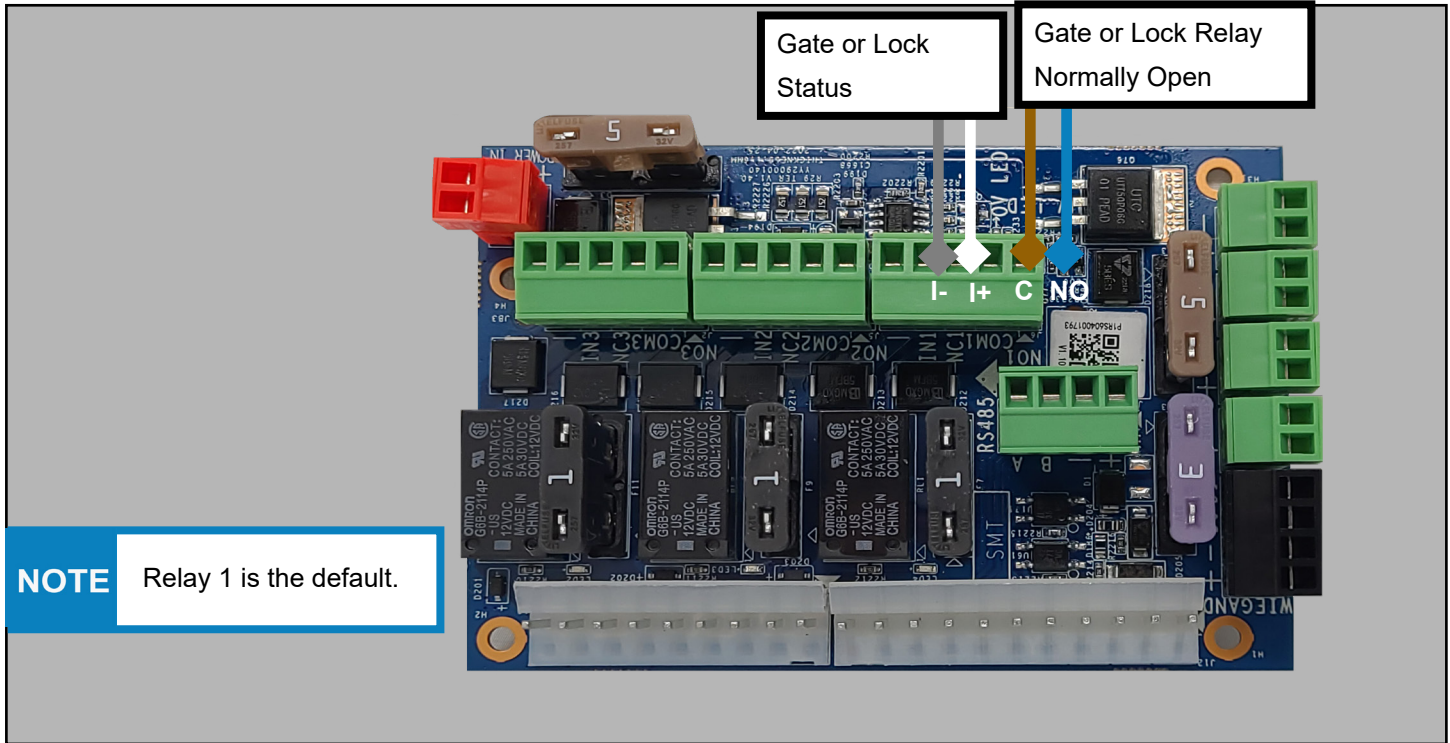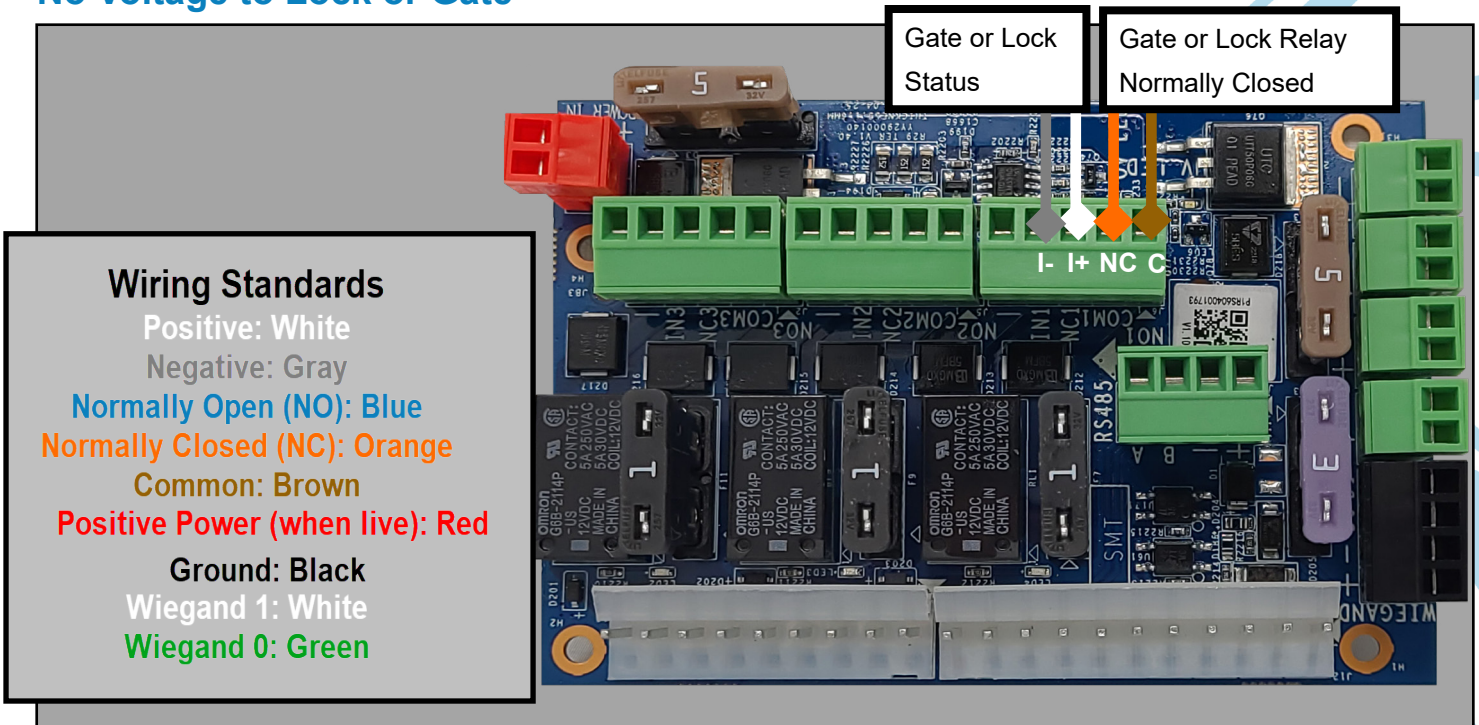
**4**

# Wiring with Transformer



A/C Power

Power Source

Blue Board

# Wiring for Solar Power



Solar Charge Controller

SUNSAVER-10L
SOLAR CONTROLLER SS-10L-12V

To Solar Panel

Battery

Blue Board
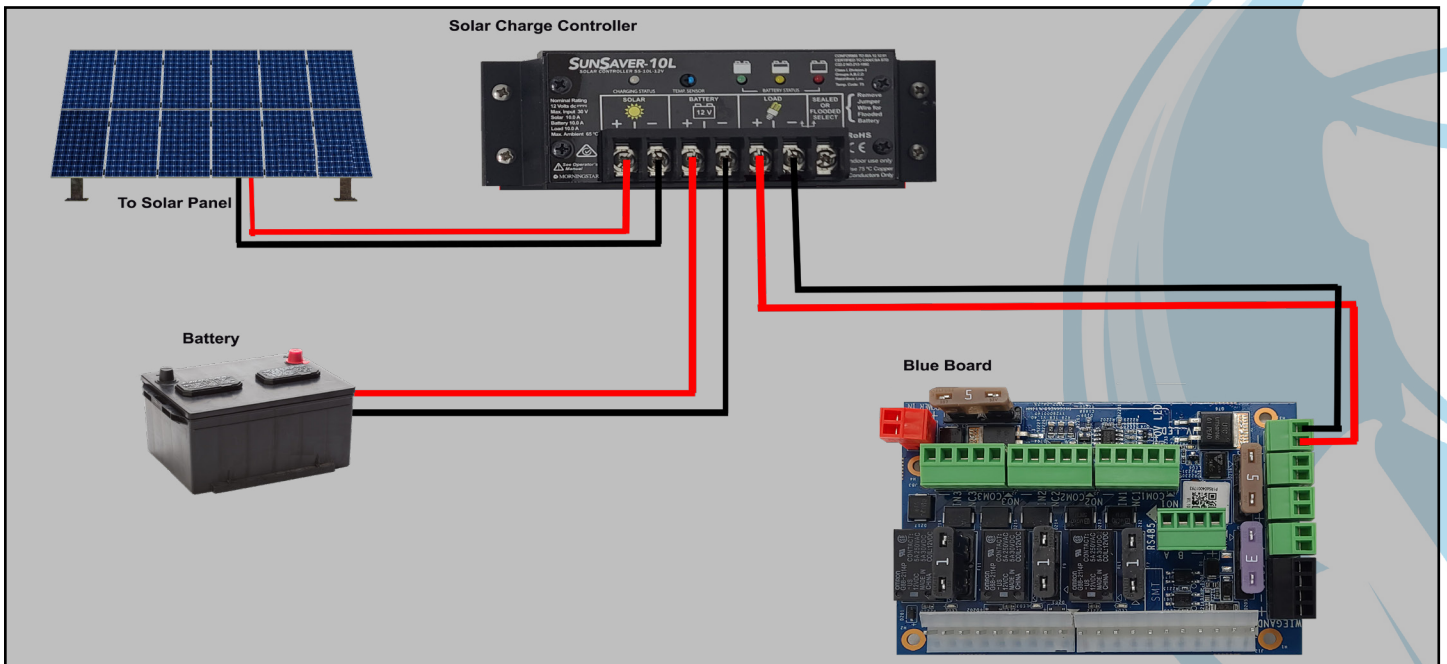
## Dry Contact Relay, Normally Open Dry Contact
### No Voltage to Lock or Gate



Gate or Lock Status

Gate or Lock Relay Normally Open

I- I+ C NO

**NOTE** Relay 1 is the default.

## Dry Contact Relay, Normally Closed Dry Contact
### No Voltage to Lock or Gate



Gate or Lock Status

Gate or Lock Relay Normally Closed

I- I+ NC C

**Wiring Standards**
Positive: White
Negative: Gray
Normally Open (NO): Blue
Normally Closed (NC): Orange
Common: Brown
Positive Power (when live): Red
Ground: Black
Wiegand 1: White
Wiegand 0: Green

## Lock Requiring Constant 12 V: Wet Contact Relay, Normally Open

Door/lock opens (releases) when power is added.

Lock Relay; power added by relay

Gate or Lock Status
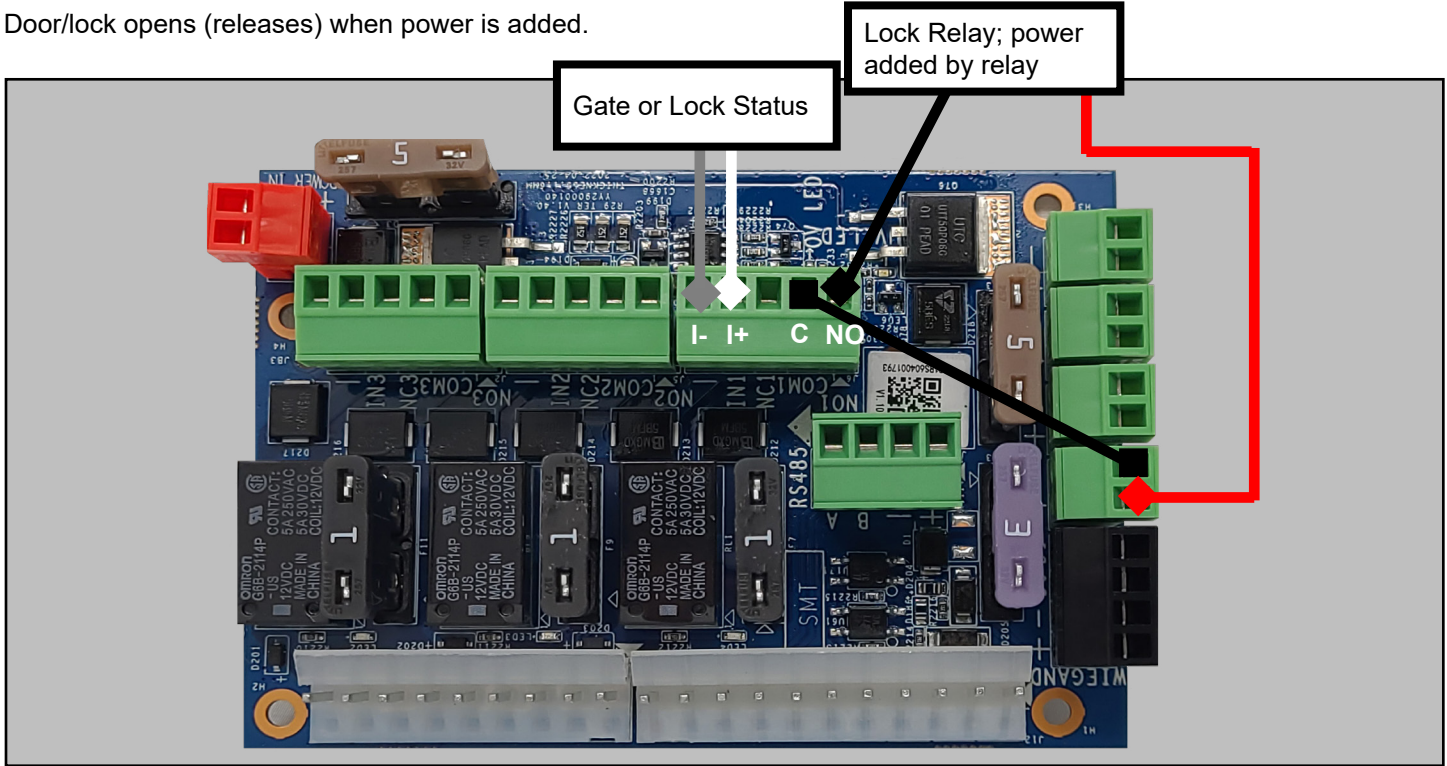


## Lock Requiring Constant 12 V: Wet Contact Relay, Normally Closed

Door/lock opens (releases) when power is removed.
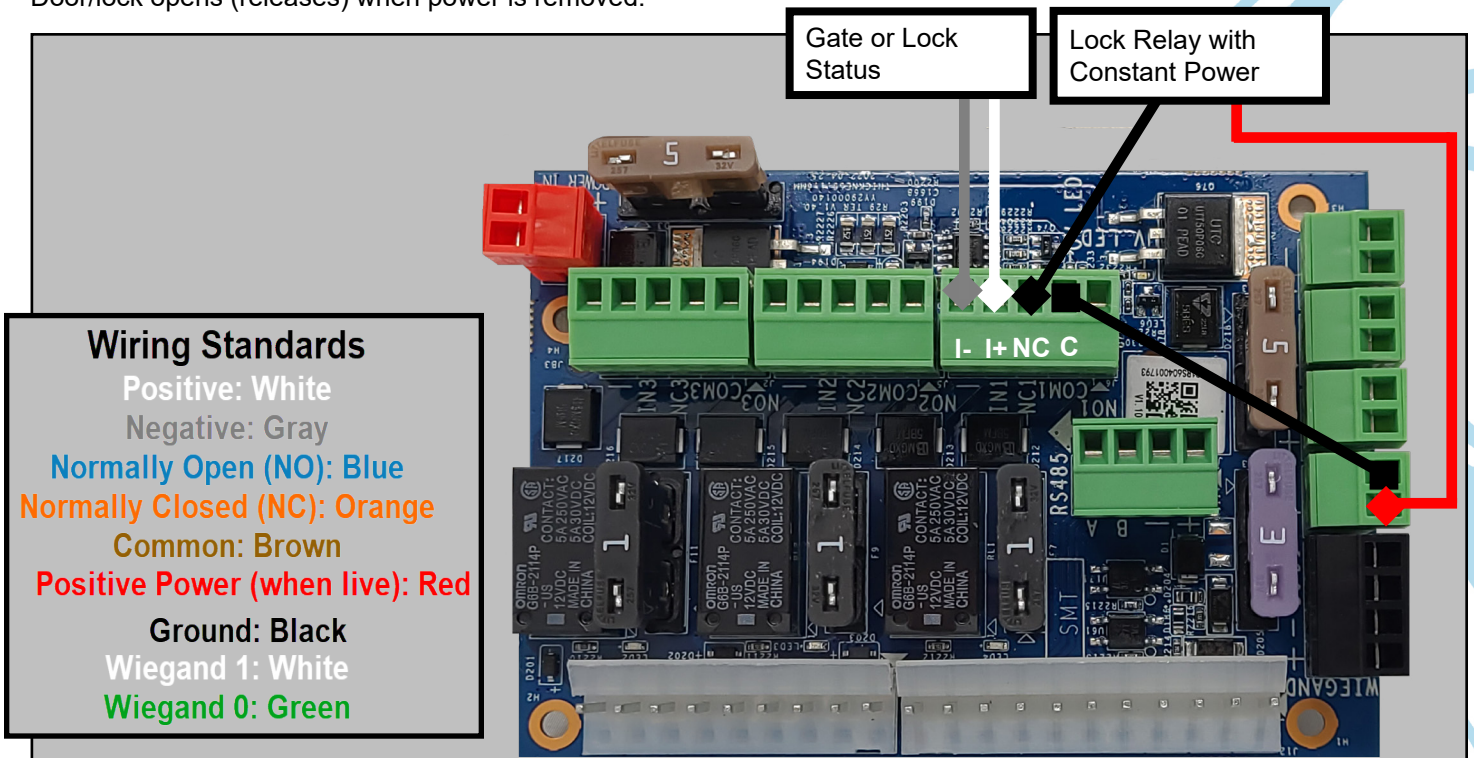
Gate or Lock Status

Lock Relay with Constant Power

**Wiring Standards**
Positive: White
Negative: Gray
Normally Open (NO): Blue
Normally Closed (NC): Orange
Common: Brown
Positive Power (when live): Red
Ground: Black
Wiegand 1: White
Wiegand 0: Green

# Wiegand Wiring to Board and Direct to Faceplate, 26 Bit Reader
## To Interface Board
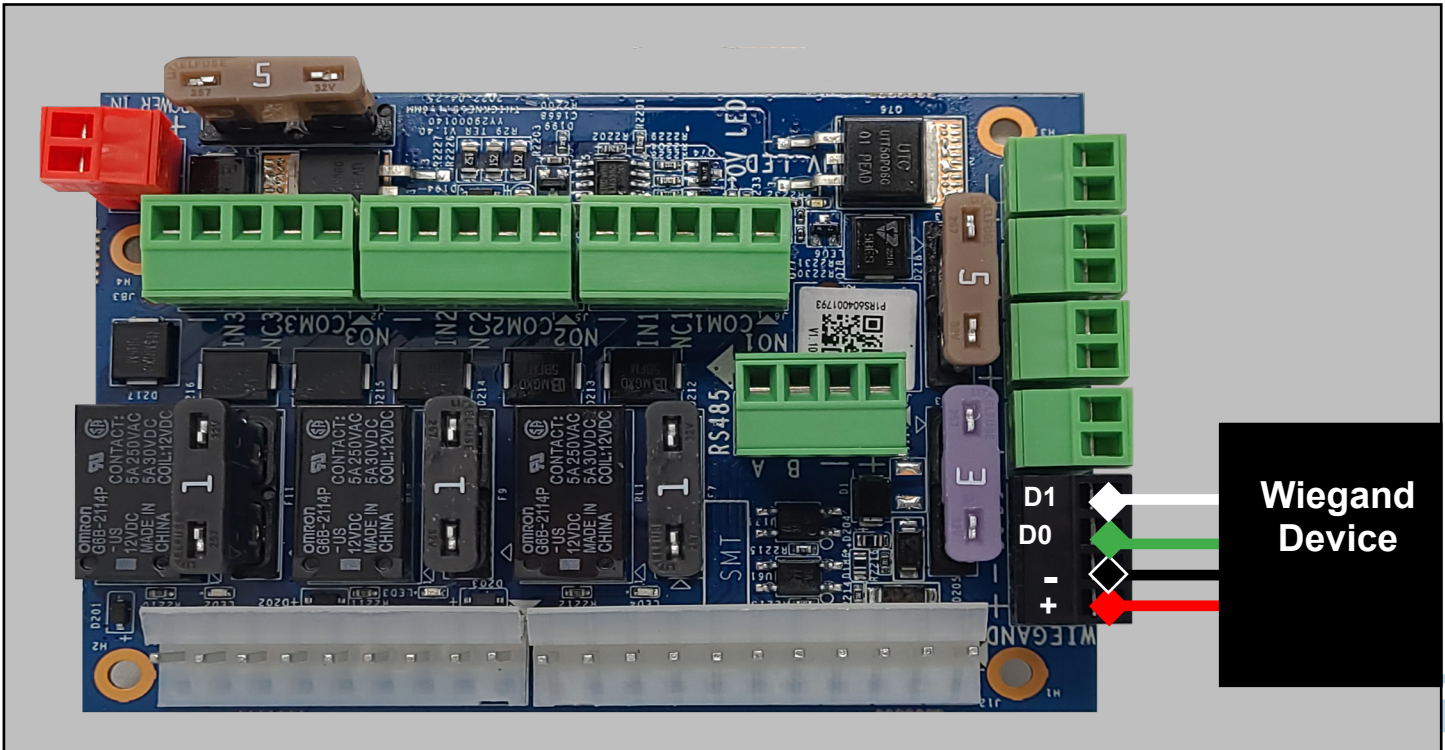
# Expansion Boards

## Install One Expansion Board

The WXL allows the addition of an expansion board.

Expansion Board with 6" cable and mounting hardware Part#: CB-WIM 2000

Metal Mounting Plate (with 15-inch cable) Part #: CB-WIM 4000

> ⚠ **Power off the device before you begin!**

## Installation

1. Use the key to open the WXL box.
   The Industrial Ethernet Switch is labeled.

2. Unscrew and remove the Ethernet switch. Set the screws aside so you can use them to reattach the plate.

3. Install the mounting plate using the screws from the Ethernet switch.

   Expansion Board 1 has jumpers on R36, R35, and R34. Ensure that Board 1 is on the right.



Mounting Plate







Install this side toward the top of box
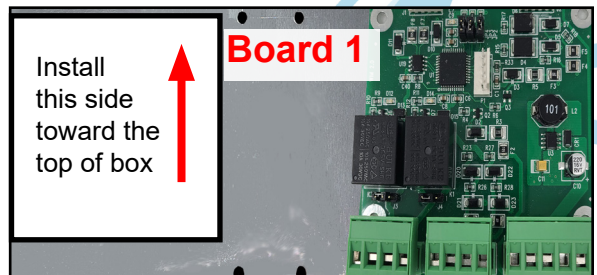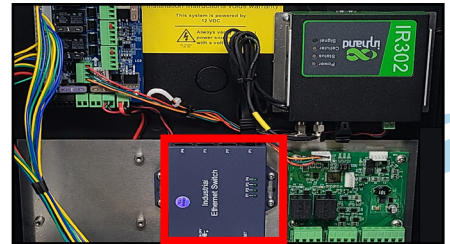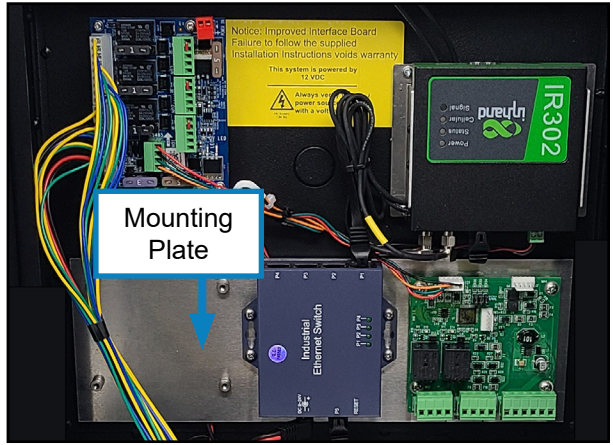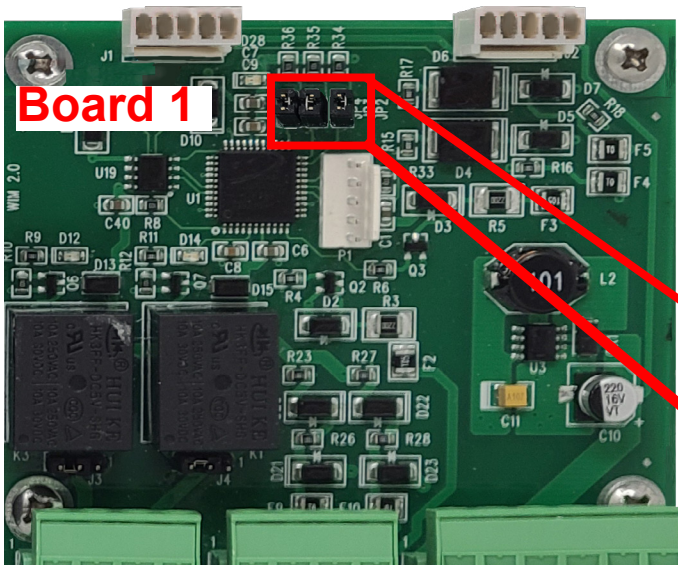
**Board 1**

**Board 1**

**NOTE** If you've ordered expansion boards, they may be already installed.

**Jumpers: R36, R35, R34**

9
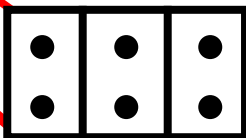
4. Reattach the Ethernet switch, port side-up, in the center of the expansion board using the screws from the shipment.

5. Connect the cables included in the shipment and the Ethernet switch.

6. Connect the expansion board to the RS485 and original WXL circuit board, as shown below. Close the box and reattach it next to the gate. You are now ready to use your WXL.
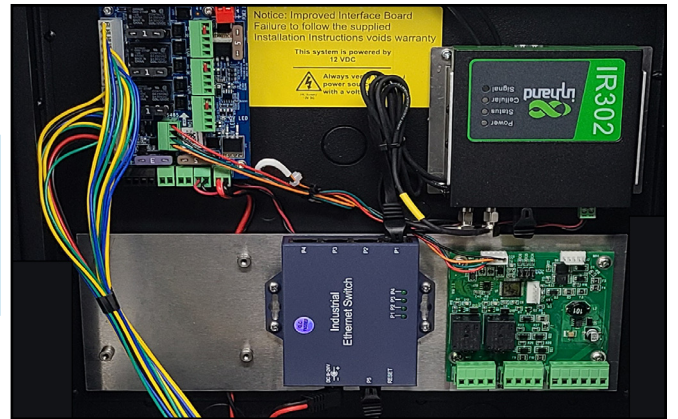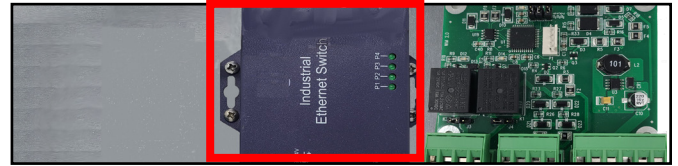
**NOTE**

The RS485 is on the right. The internal Wiegand port is on the left.

*Do not* plug the expansion board into the Wiegand.



Internal Wiegand Port
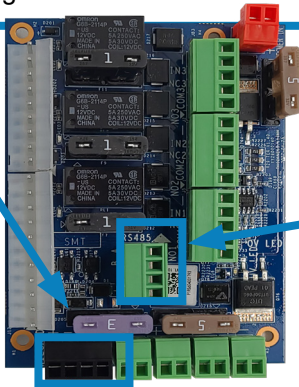
RS485



## Wiring Diagram: One Board



Main Power Source

Original Circuit Board

Modem

To Watchman Device

RS485

Expansion Board

Relays    Inputs    Wiegand

WXL Faceplate

Wiegand Device

10
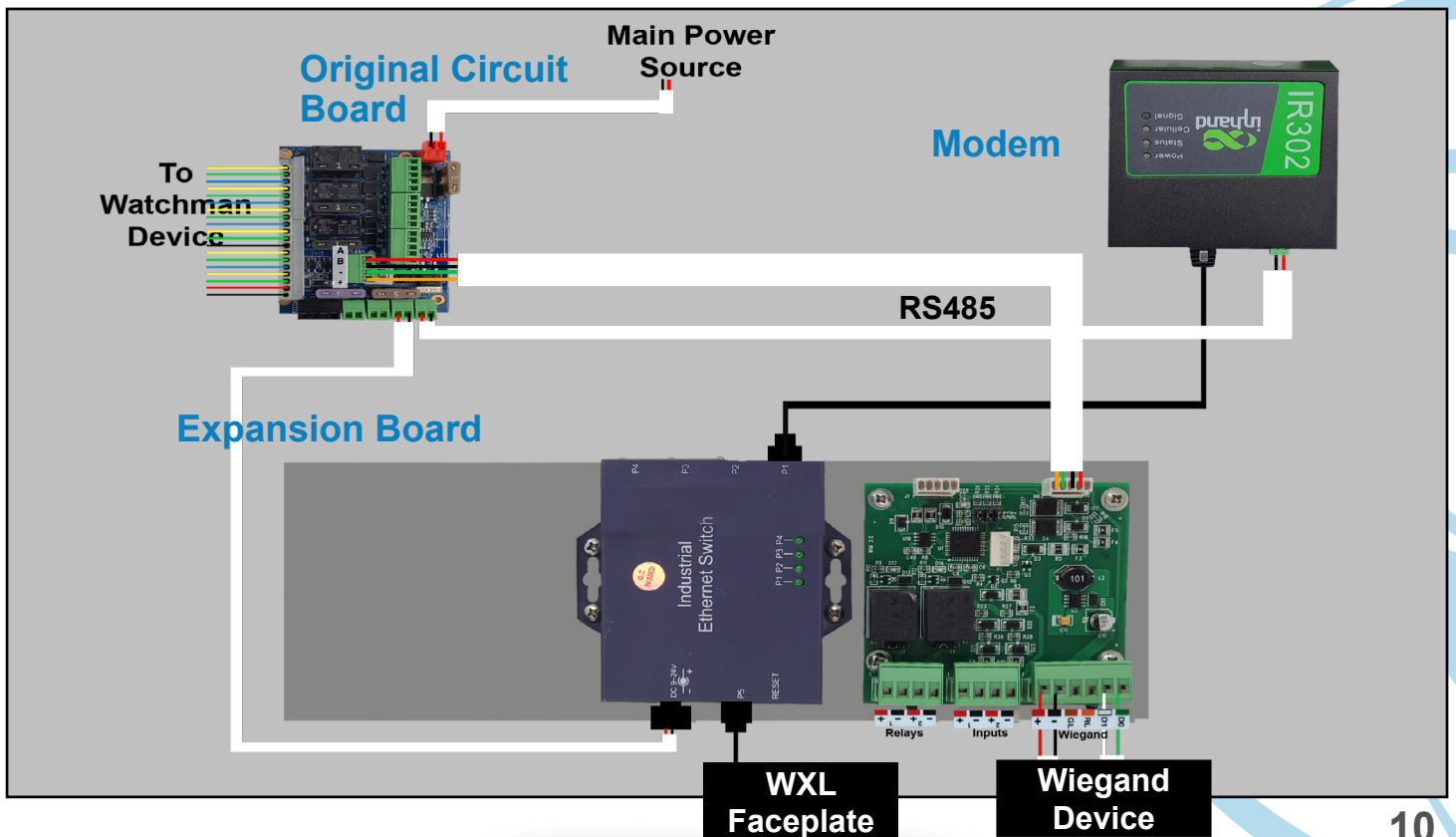
## Add Another Expansion Board

1. Unscrew and remove the Ethernet switch. Set the screws aside so you can use them to reattach the switch.



2. Ensure that Board 1 is on the right and Board 2 is on the left. Expansion Board 1 has jumpers on R36, R35, and R34.

   Expansion Board 2 has jumpers on R36 and R35 (see below).





**Board 2**          Install this side toward the top of box          **Board 1**

## Board 2



**Jumpers: R36, R35**

## Board 1



**Jumpers: R36, R35, R34**
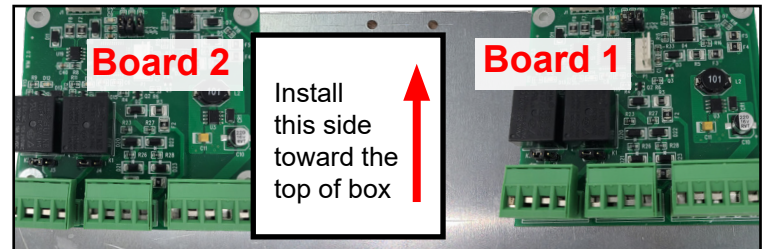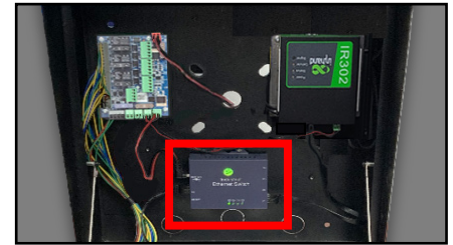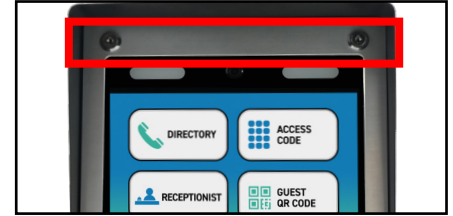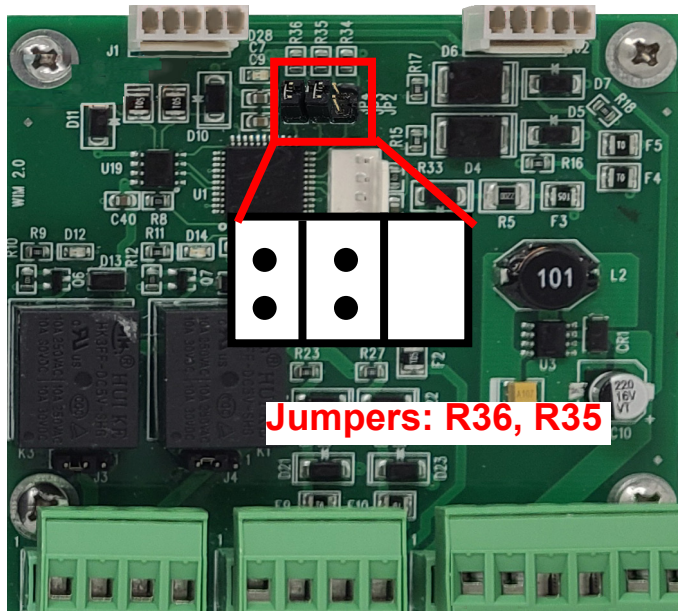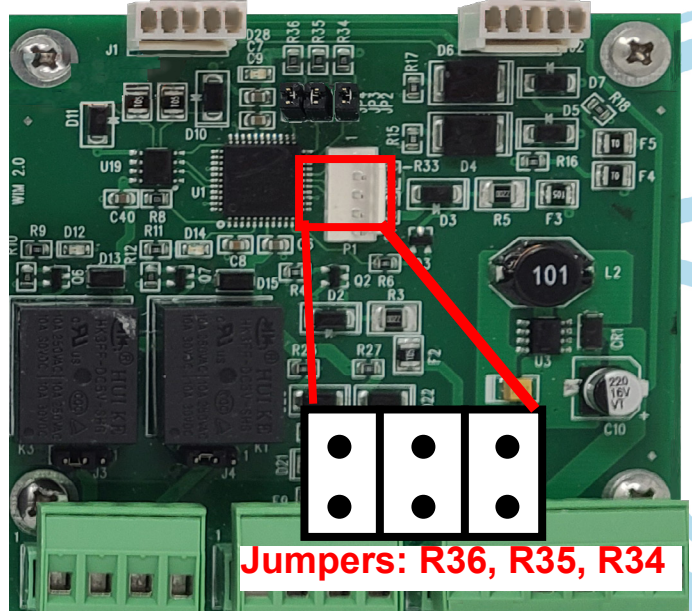
3. Reattach the Ethernet switch, port side-up, in the center of the expansion board.

4. Connect the board with the jumper cables.



**11**

5. Install Expansion Board 2 on the left side of the mounting plate. Check that you have jumpers on R34 and R35. Connect the expansion board to the RS485 and original WXL circuit board, as shown below. Close the box and remount it. You are now ready to use your WXL.

**Internal Wiegand Port**

**RS485**

All jumper cable tubing is labeled with the name
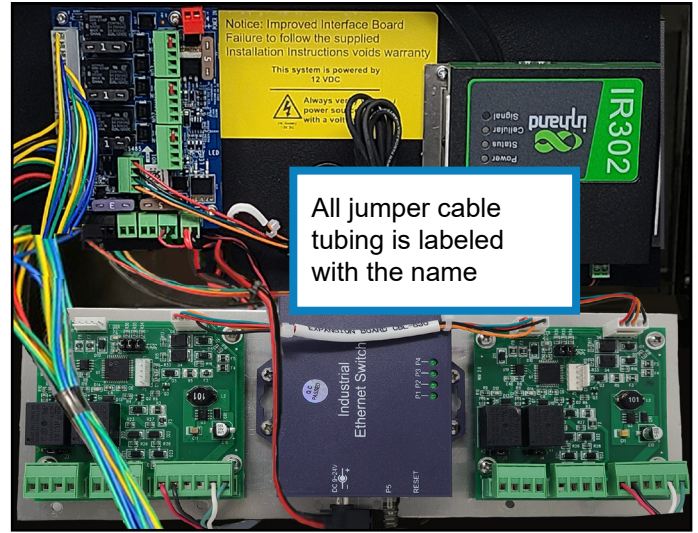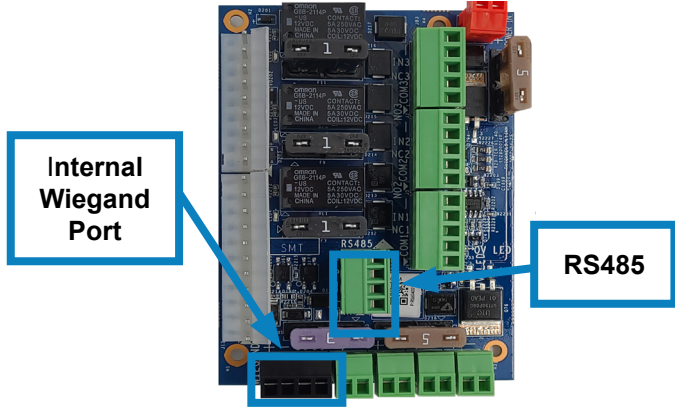
# WXL Layout with Both Expansion Boards Connected

**Original Circuit Board**

**Modem**

**Main Power Source**

**To Watchman Device**

**RS485**

**Expansion Board**

**2 jumpers**

**3 jumpers**

Relays  Inputs  Wiegand  Relays  Inputs  Wiegand

**Wiegand Device**

**WXL Faceplate**

**Wiegand Device**

**12**
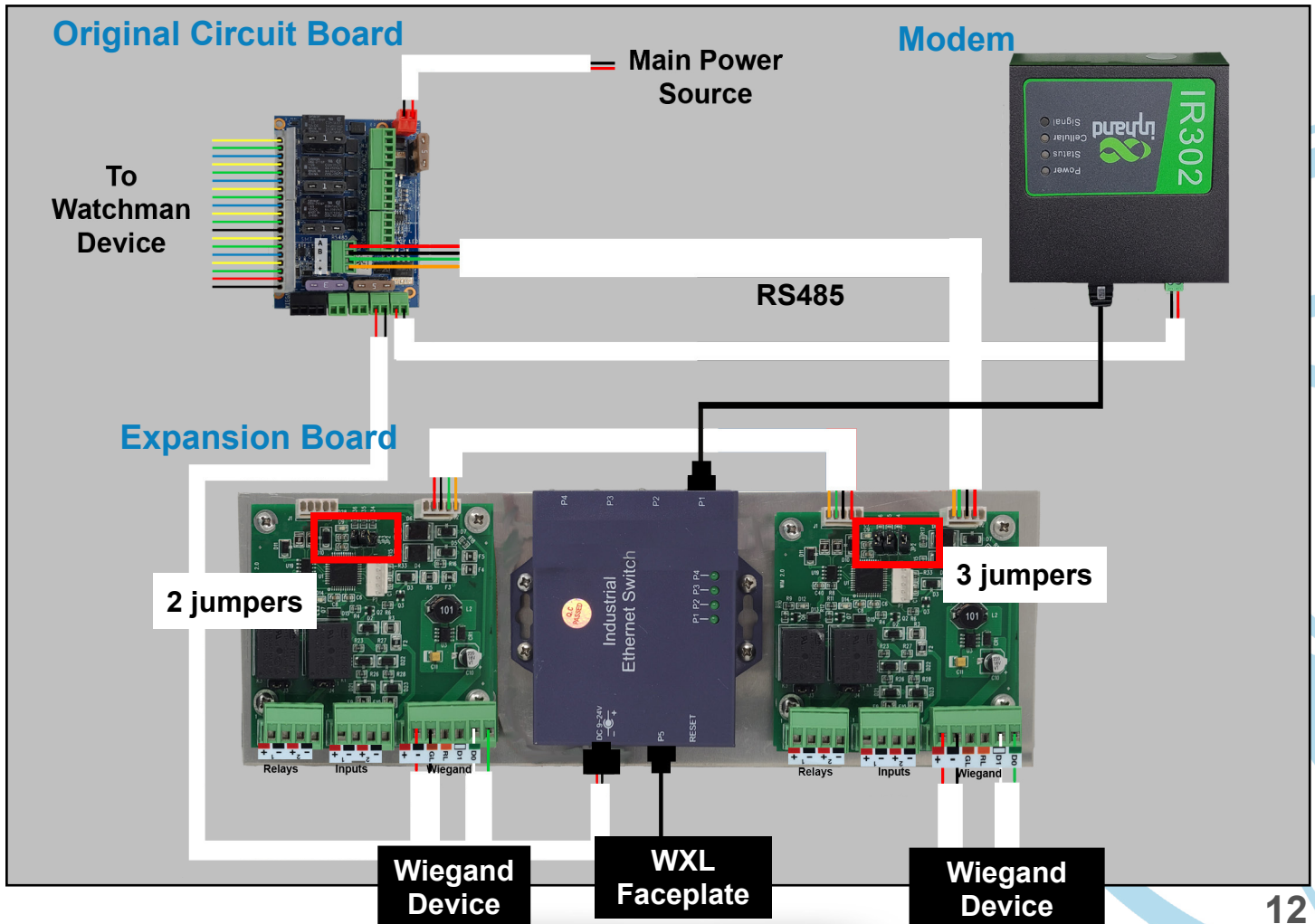
# Magnetic Switch Setup

**NOTE** Gate statuses can be inverted. If needed, please call CellGate to invert.

The Mag Switch can be placed anywhere that allows A and B to be pulled at least 2 inches away from each other when the gate is open and within 1.5 inches when the gate is closed.

A   B

**1.5 inch**

**Gate Closed**

A   B

**2 inch**

**Gate Open**

**Door Wiring**

A
B

A   B          A   B

Door Jamb   Or   Hinge

**Gate Setup**

A   B   A          B   A   B

Hinge   Or   Center   Or   Hinge

**13**
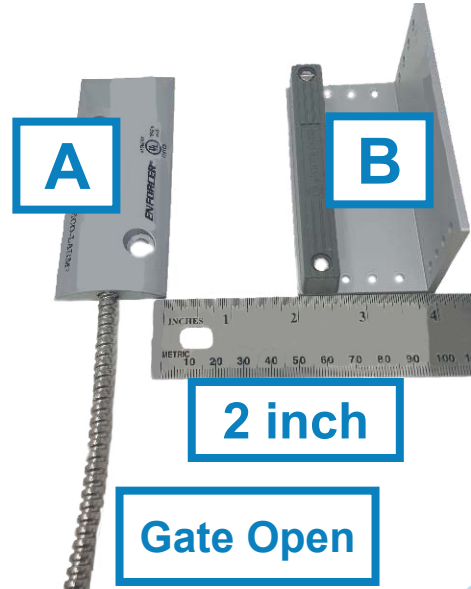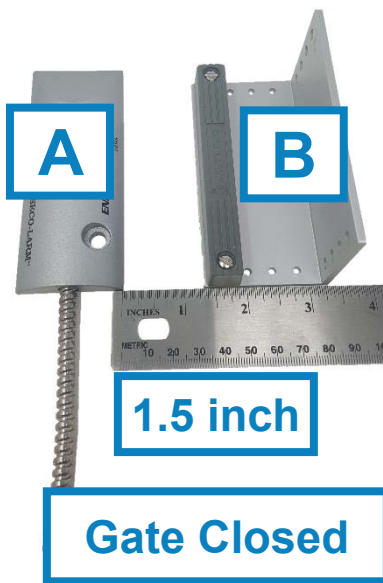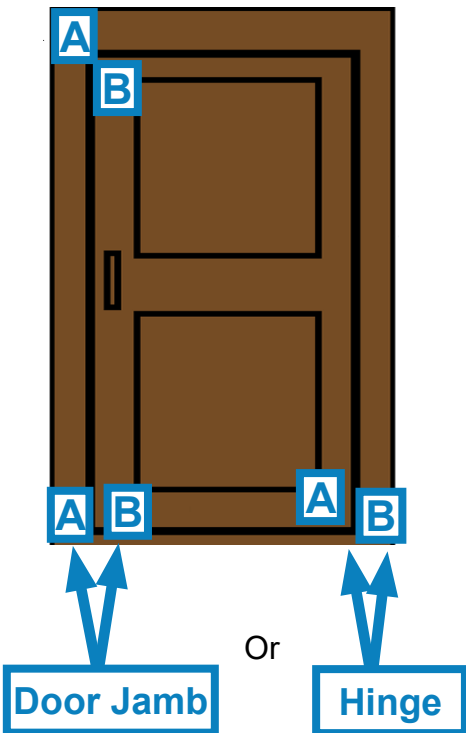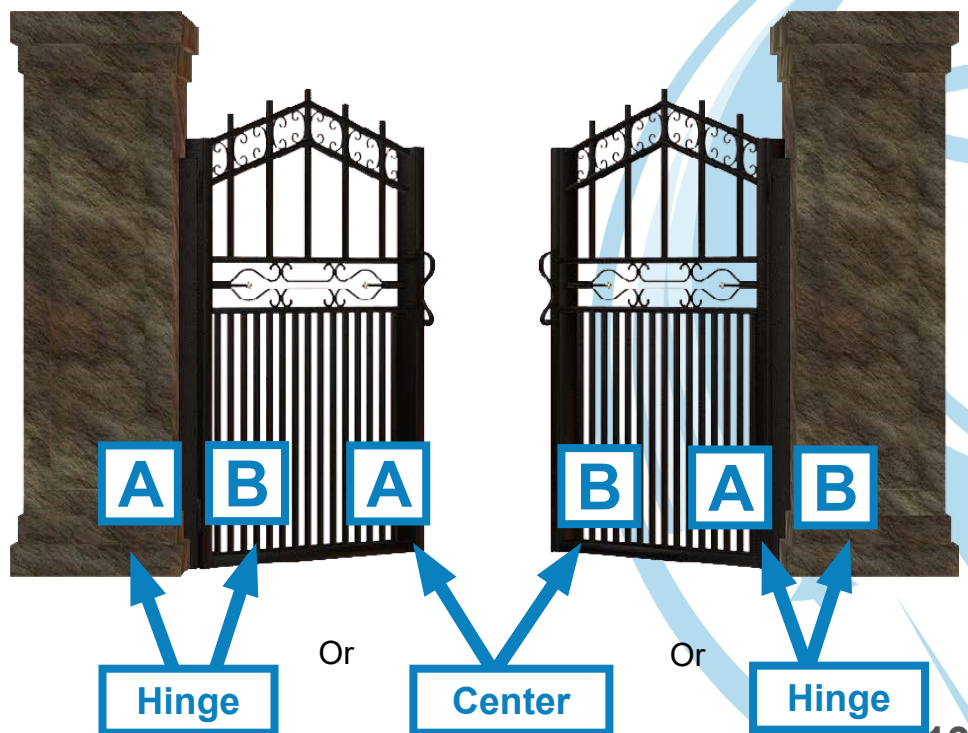
## Optional External Camera Wiring

> ⚠ ***Do not*** make electrical connections to camera with the system energized. This will damage the camera and is not covered under the camera warranty.

⚠ 18 Gauge Wire Minimum for Install

**Camera with power and Ethernet**
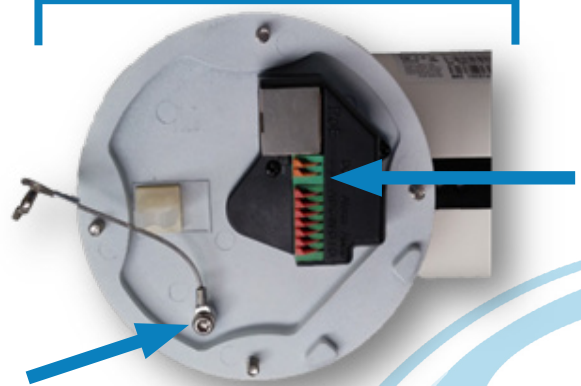
**Ethernet Connector**

**NOTE** Not compatible with VPN device numbers:
CAM 292, 293, 295, 296.

**14**

# Mounting Illustrations

## Mounting to Architectural Post (Standard Pedestal Mount)

Part #: ENC-WFM1005

324 mm (14.75 in)

375 mm (14.75 in)

142 mm (5.58 in)

76.4 mm (3 in)

76.4 mm (3 in)

unlock
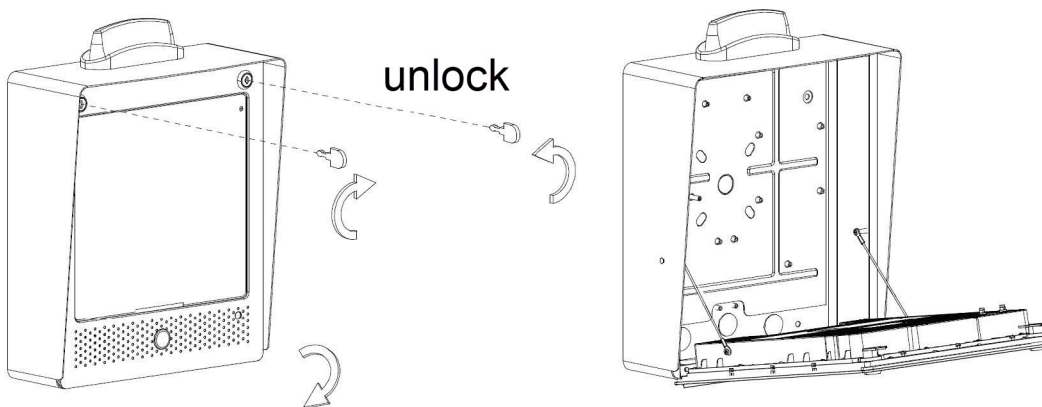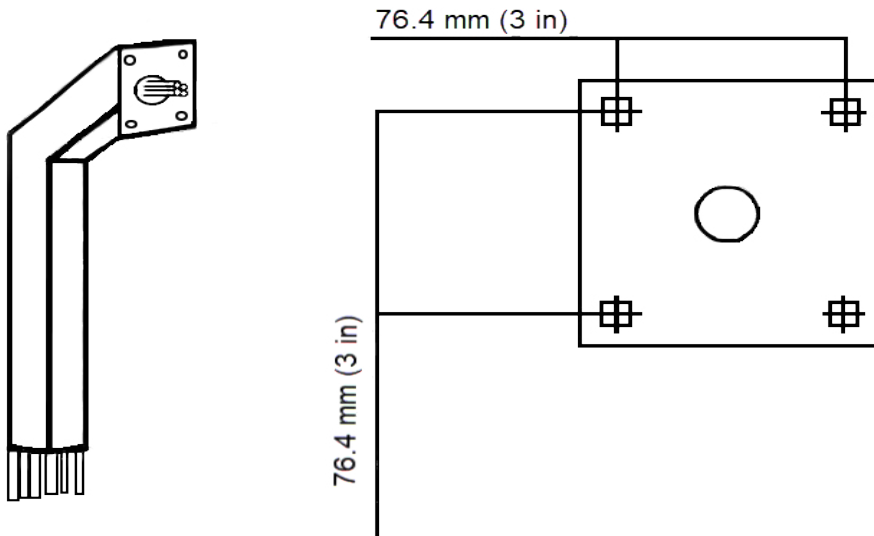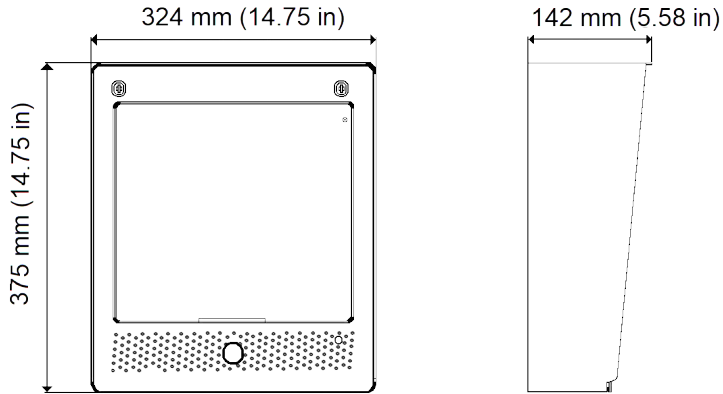
## Mounting to Architectural Post (Standard Pedestal Mount) (Continued)
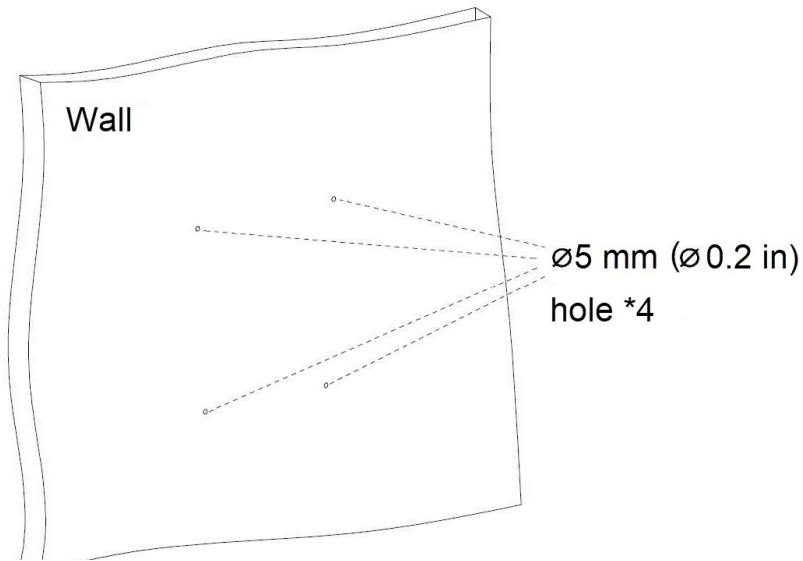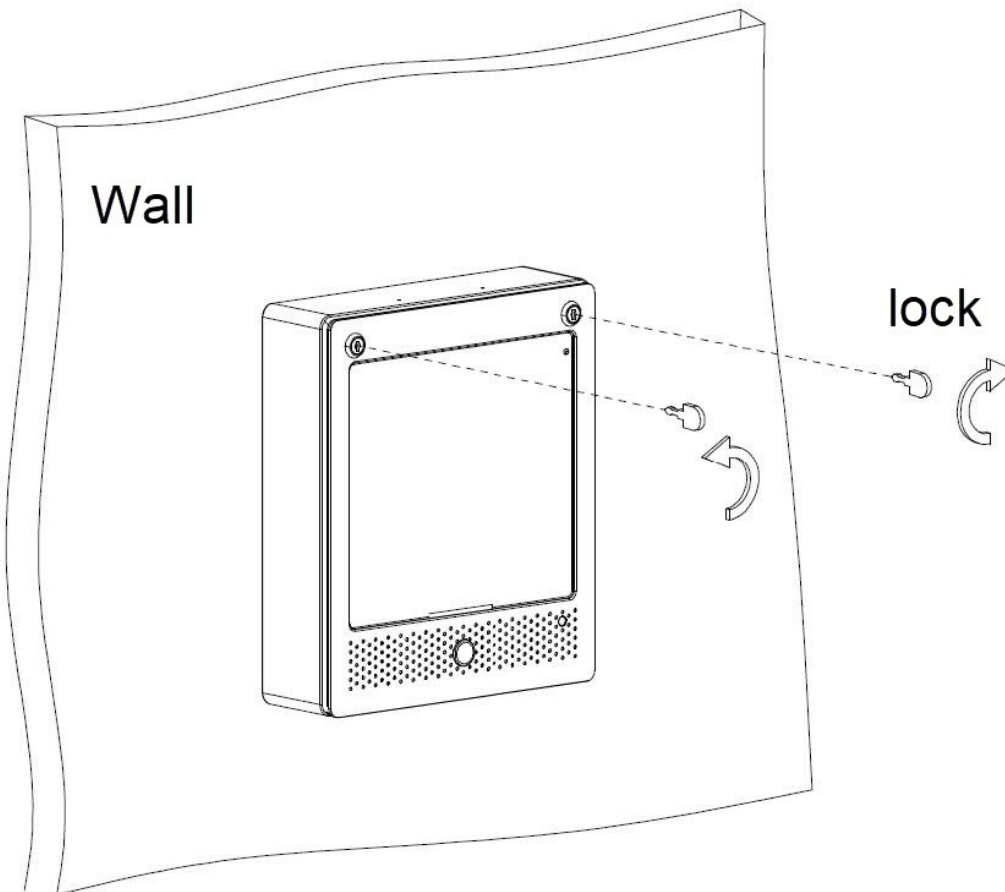


lock
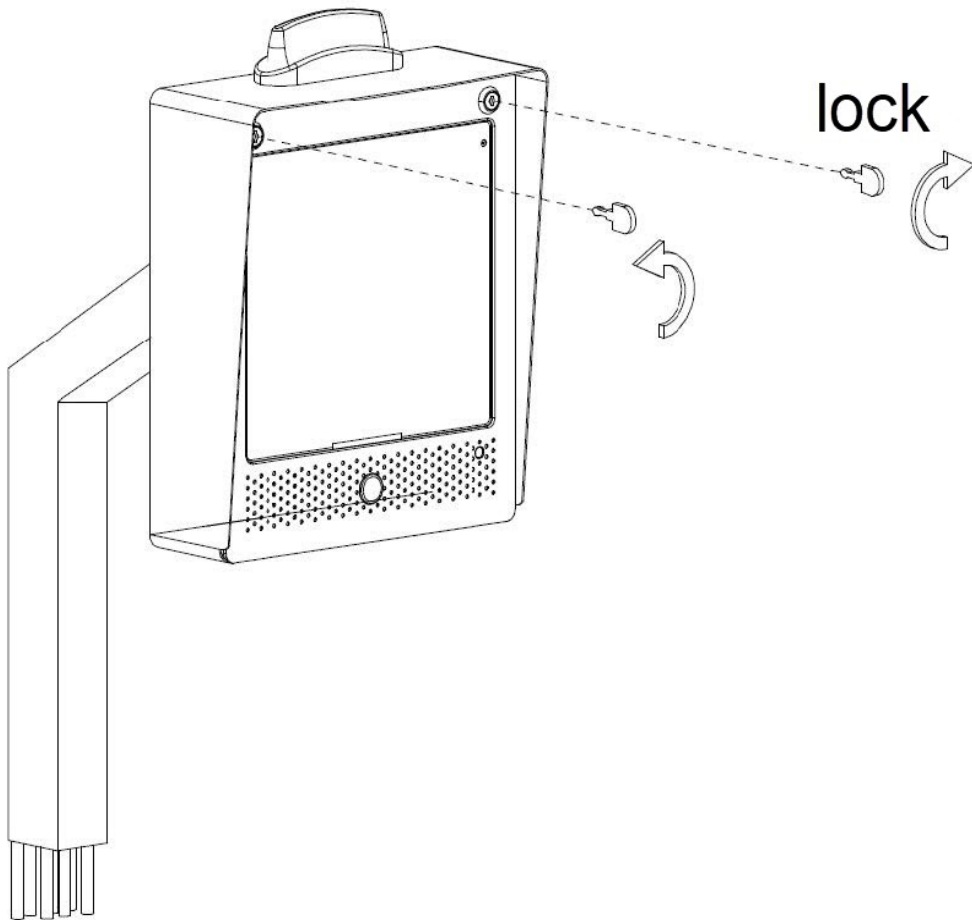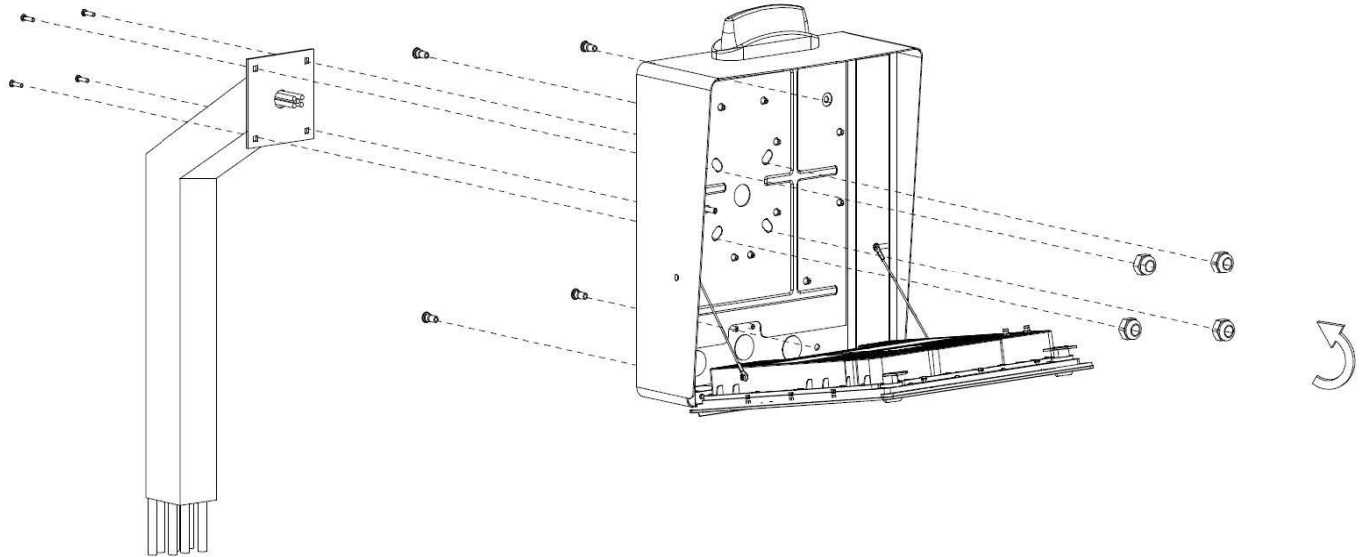
# Mounting to Architectural Post (Type B)

Part #: ENC-WFM1006
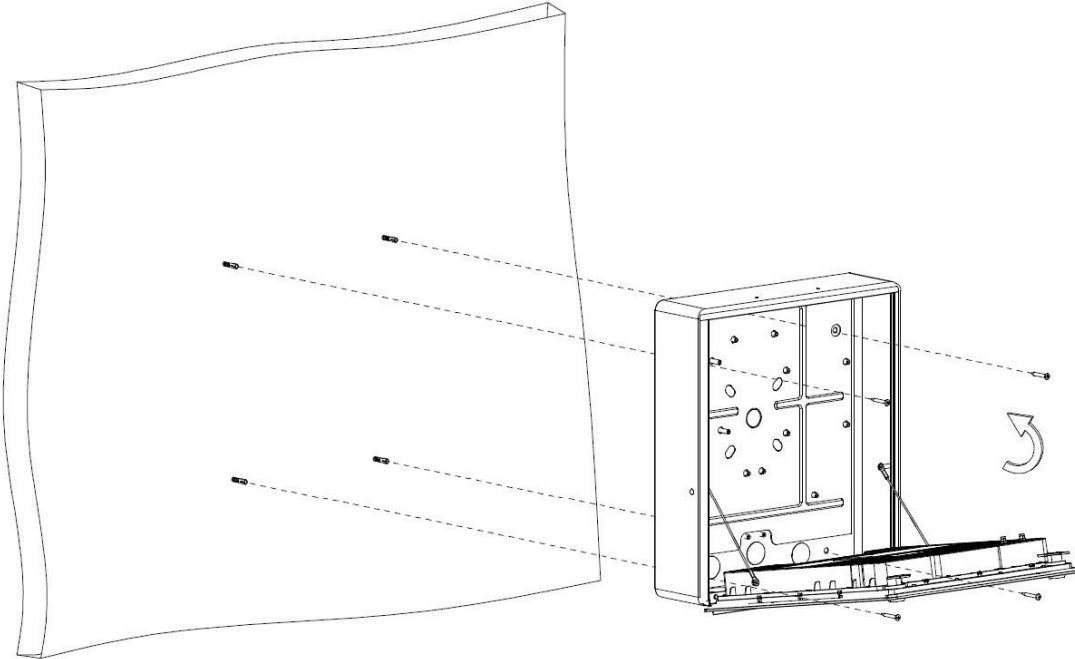


324 mm (14.75 in)

375 mm (14.75 in)

142 mm (5.58 in)

⌀5 mm (⌀0.2 in)
hole *4

257.18 mm (10.13 in)

276.23 mm (10.88 in)

228.6 mm (9 in)

unlock

lock
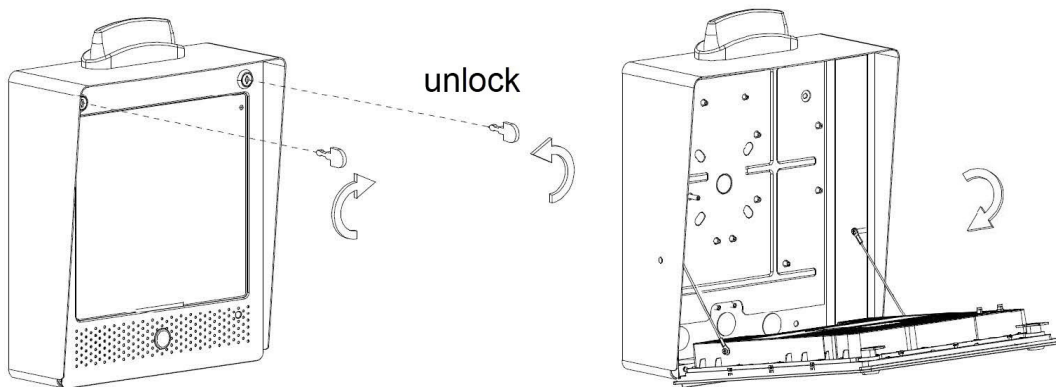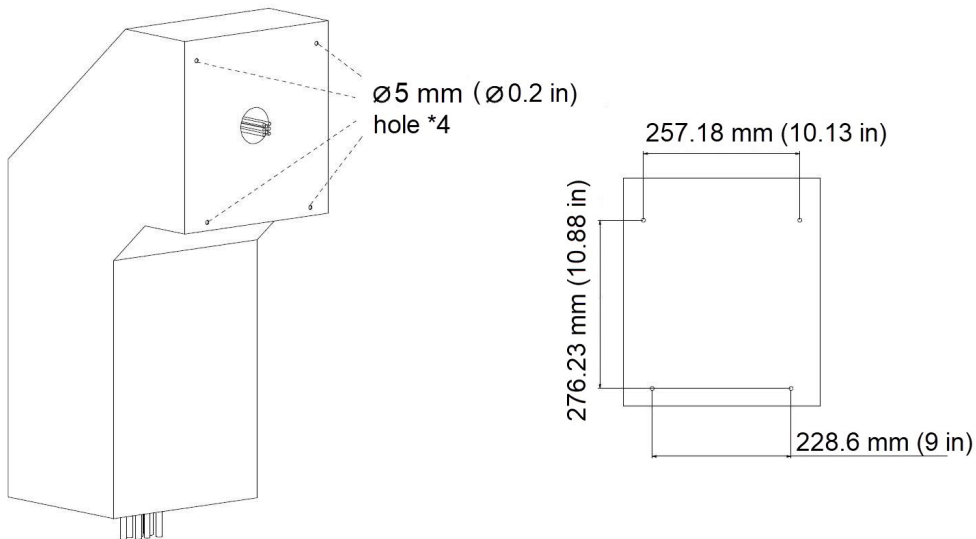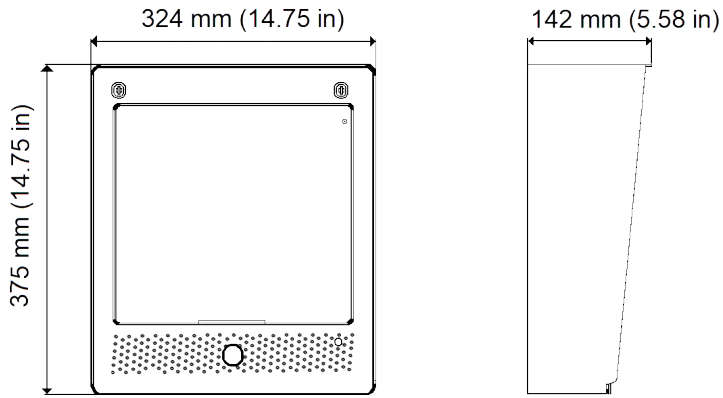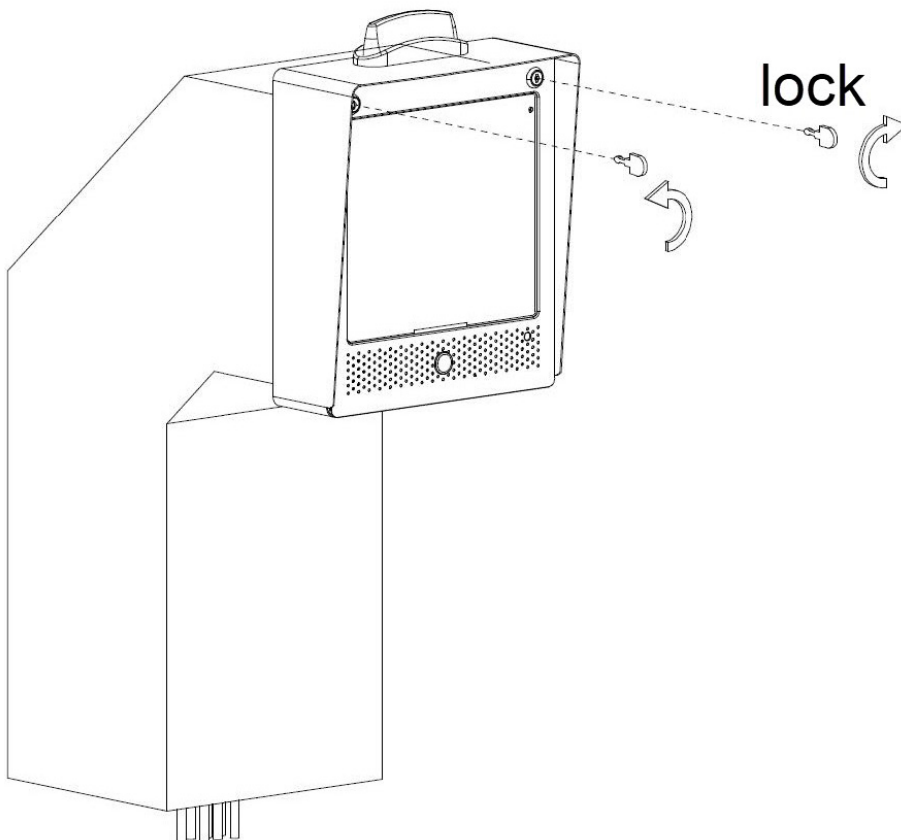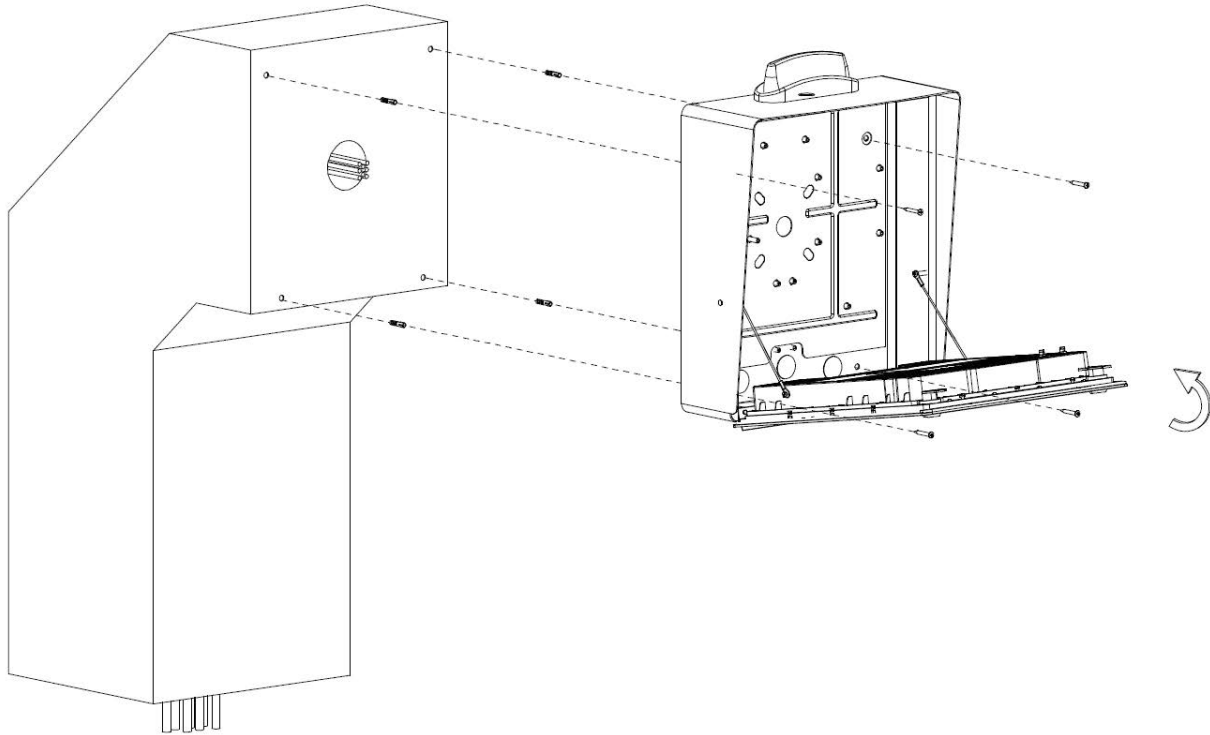
## Mounting to Surface

Part #: AA1XLPE VZN



323 mm (12.73 in)

95 mm (3.75 in)

374 mm (14.74 in)

Wall

ø5 mm (ø 0.2 in)
hole *4

257.18 mm (10.13 in)

276.23 mm (10.88 in)

228.6 mm (9 in)

unlock

19
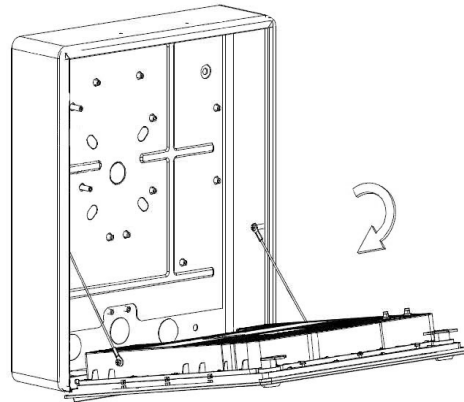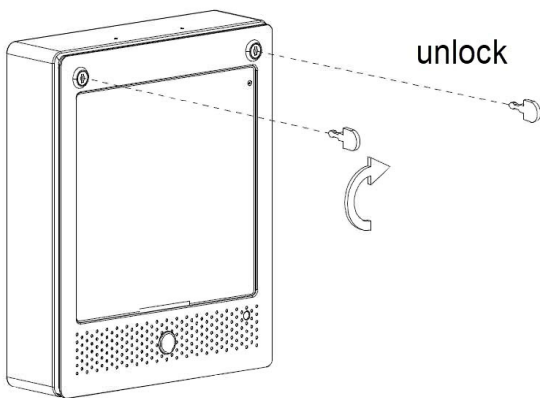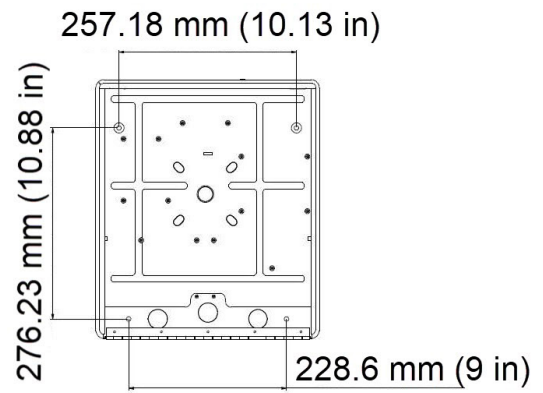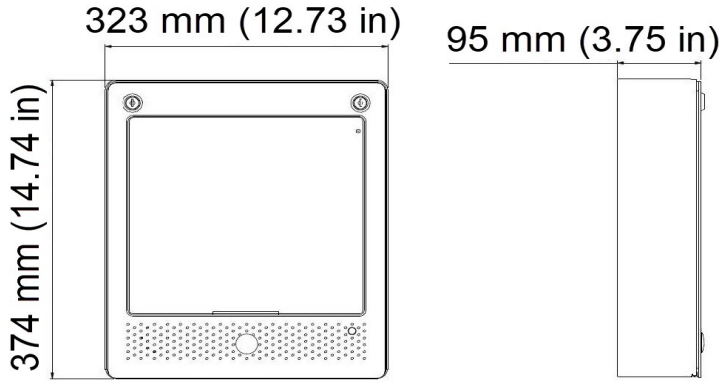
## Mounting to Surface (Continued)

Wall

lock

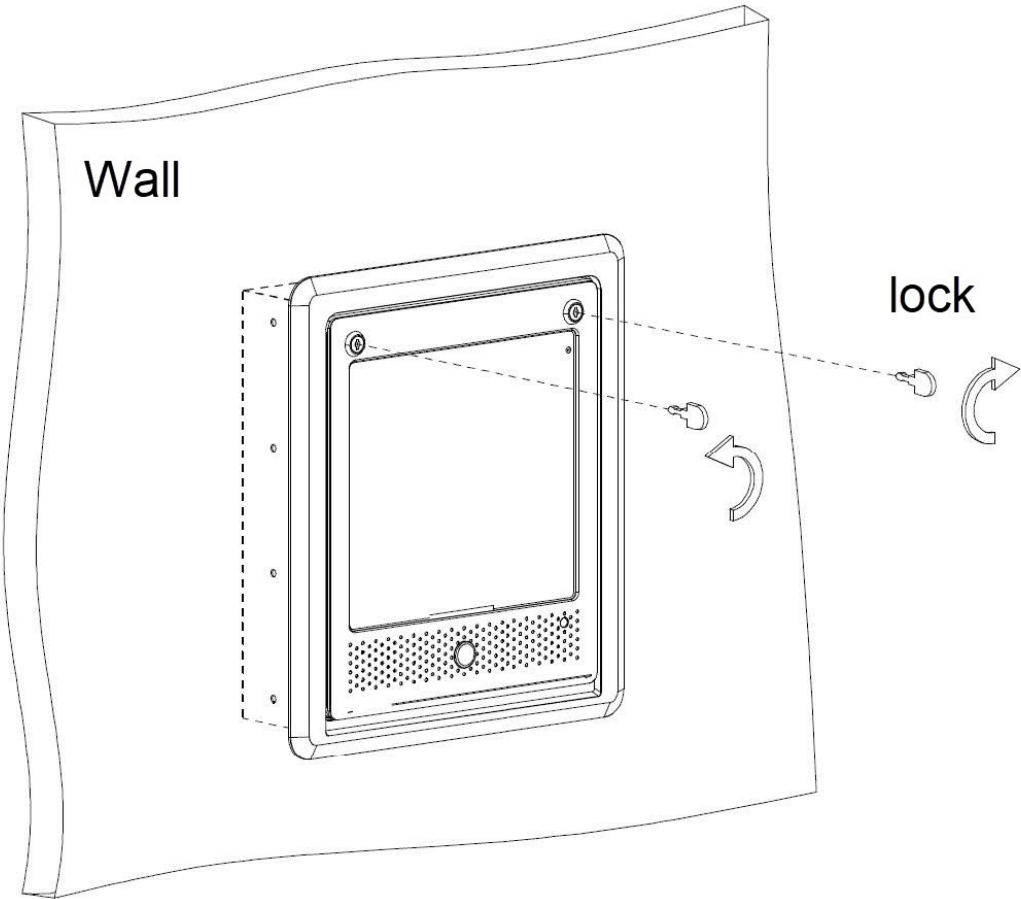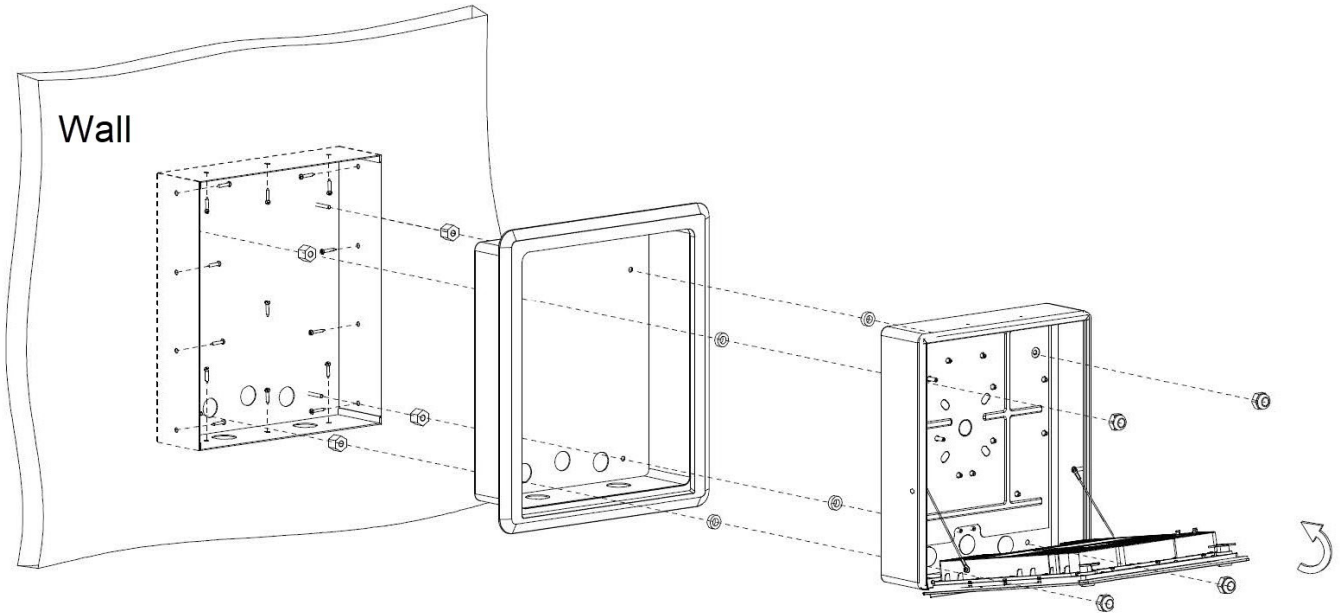## Flush Mounting

Watchman Part #: AA1XLPE,

Unit Part #: AA1XLFM, AA1XLFM

Flush Mount Kit Part #: ENC-WFM1003, ENC-WFM1004



397 mm (15.62 in)

446 mm (17.55 in)

107 mm (4.19 in)

94 mm (3.7 in)

Wall

346 mm (13.62 in)

396 mm (15.59 in)

96 mm (3.78 in)

Wall

unlock
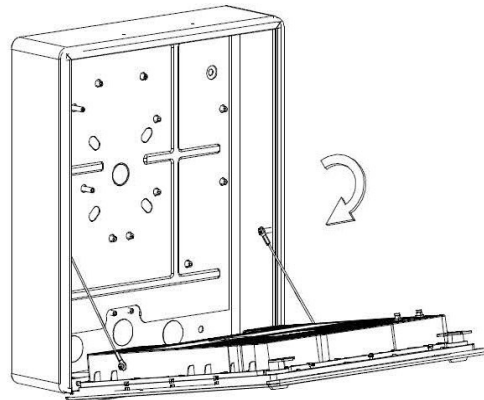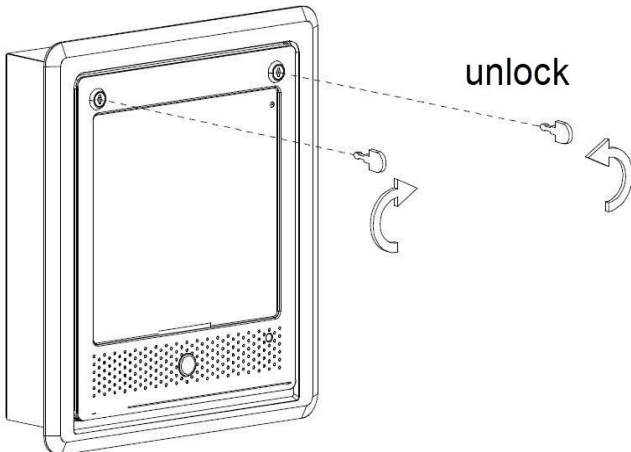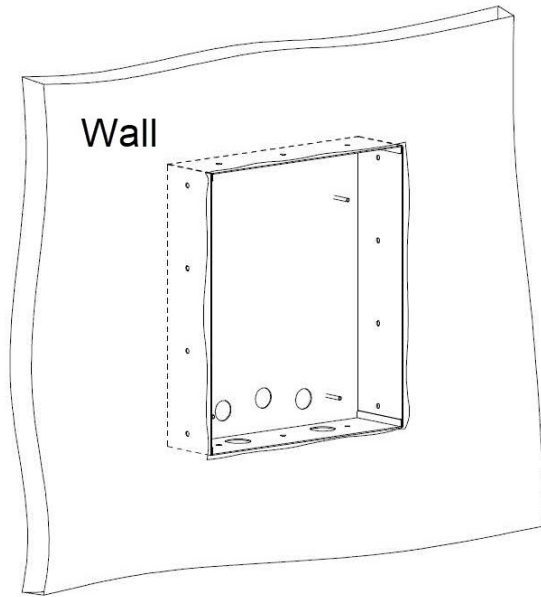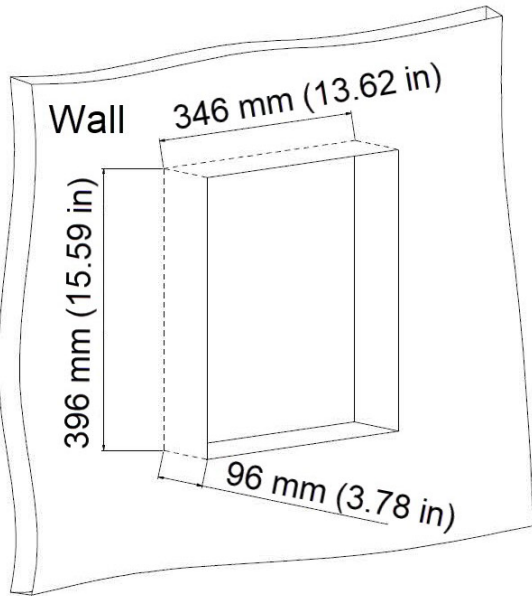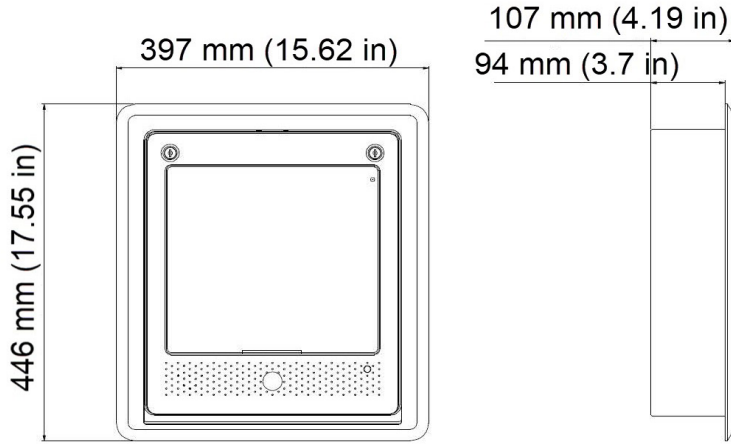
## Flush Mounting (continued)



Wall

Wall
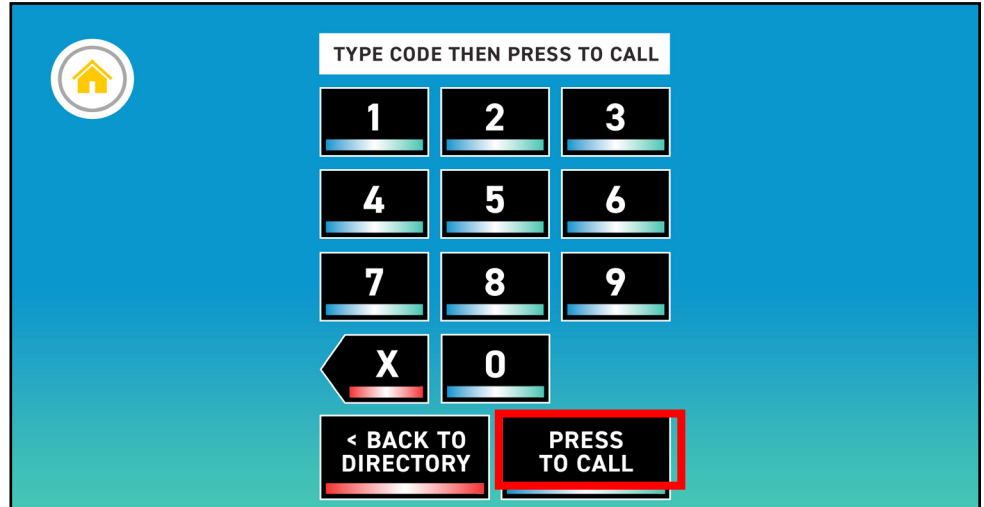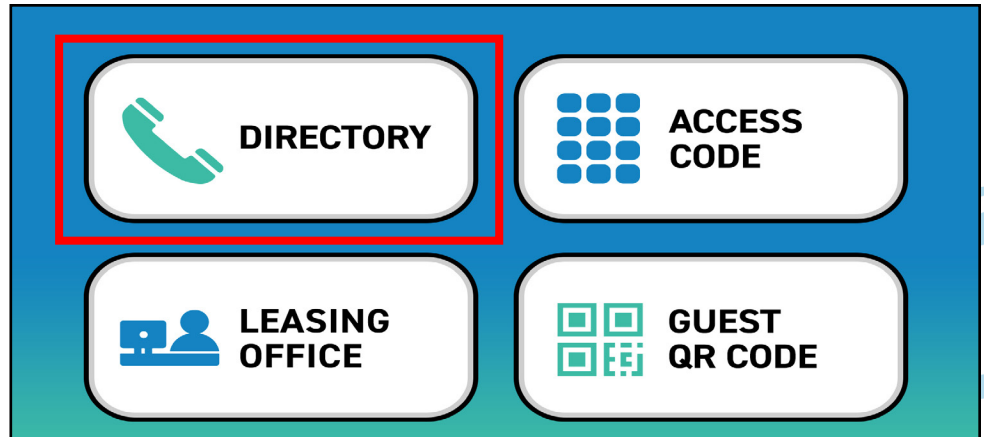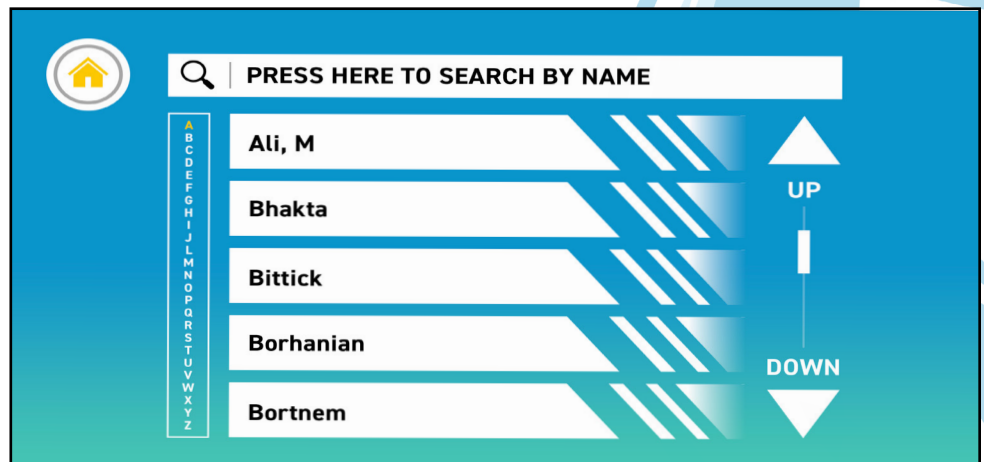
lock

# Testing

1. Enter the Testing Code, then tap the Enter. The Code activates Relay 1 (the gate should open).



2. From the Home screen, tap **Directory** to open the directory, which lists all callgroups.



3. Tap a callgroup to initiate call. An automated message will play confirming the call was successful.
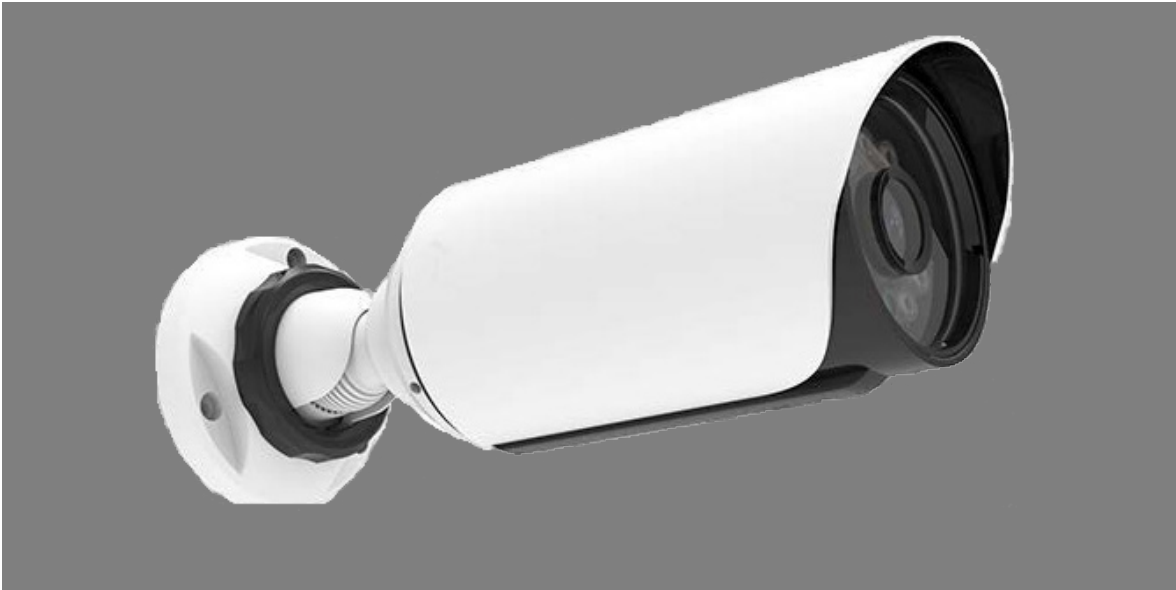
## External Camera Installation

If you're installing an External Camera, call CellGate Technical Support for testing.

Technical Support: (972) 231-1999, option 2.



## Customer Information

Leave the following items with the Customer:

- Customer Information Packet
- WXL - Key
  - ○ Installer keeps one key and gives one key to the customer