

Watchman WXL Installation Guide



Updated December 2025



Installer Test Code
Stops after 10 uses



Contents

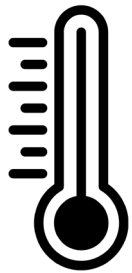
Items Included.....	3
Standard Power Wiring.....	4
Connection Type: Internet.....	5
Connection Type: VPN.....	5
Connection Type: Cellular.....	6
Wiring	
Blue Board.....	8
Wiegand Wiring.....	9
Gate Status from Gate Operator.....	9
Dry Contact Relay, Normally Open.....	10
Dry Contact Relay, Normally Closed.....	10
Wet Contact Relay, Normally Open.....	11
Wet Contact Relay, Normally Closed.....	11
Installing Expansion Boards.....	12
Relay Operation Configuration.....	15
Mounting to a Pedestal.....	17
Device Grounding.....	18
Mounting to a Surface.....	19
Flush Mounting.....	20





Items Included in Kit

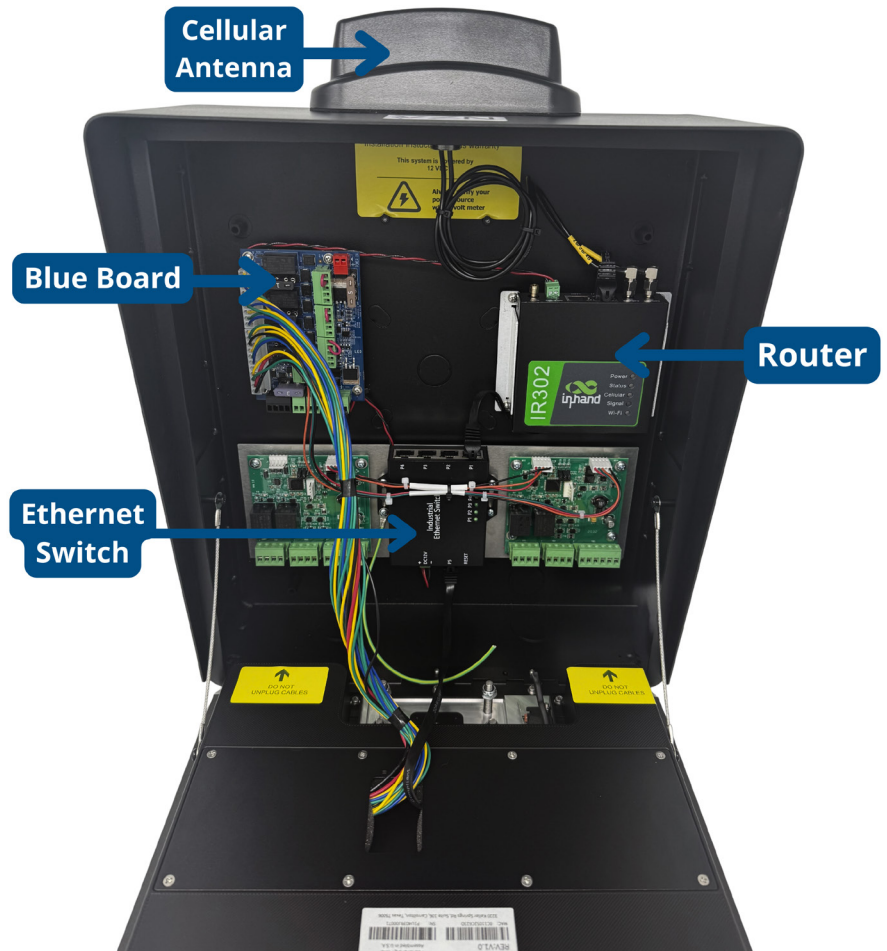
- Watchman XL Unit
- Connection Device: Ethernet Switch and InHand Router (cellular), Modem (internet), VPN (internet)
- 12 Volt DC Power Supply
- Blue Board
- Keys
- Flangenut 1/4" (x4)
- Carriage Bolt 1/4" x 1" (x4)
- Customer Information Packet
- Optional: 1 or 2 Expansion Boards



Operating Temperatures

-20° to 55° C
-4° to 131° F

Power Wiring Guidelines	
Gauge Wire	Wire Run
18	25 feet
16	50 feet
12	60 feet



Ensure the system is powered off before unplugging any cables, including **CBL-840** and **CBL-830**. Disconnecting these while powered on will damage the equipment.

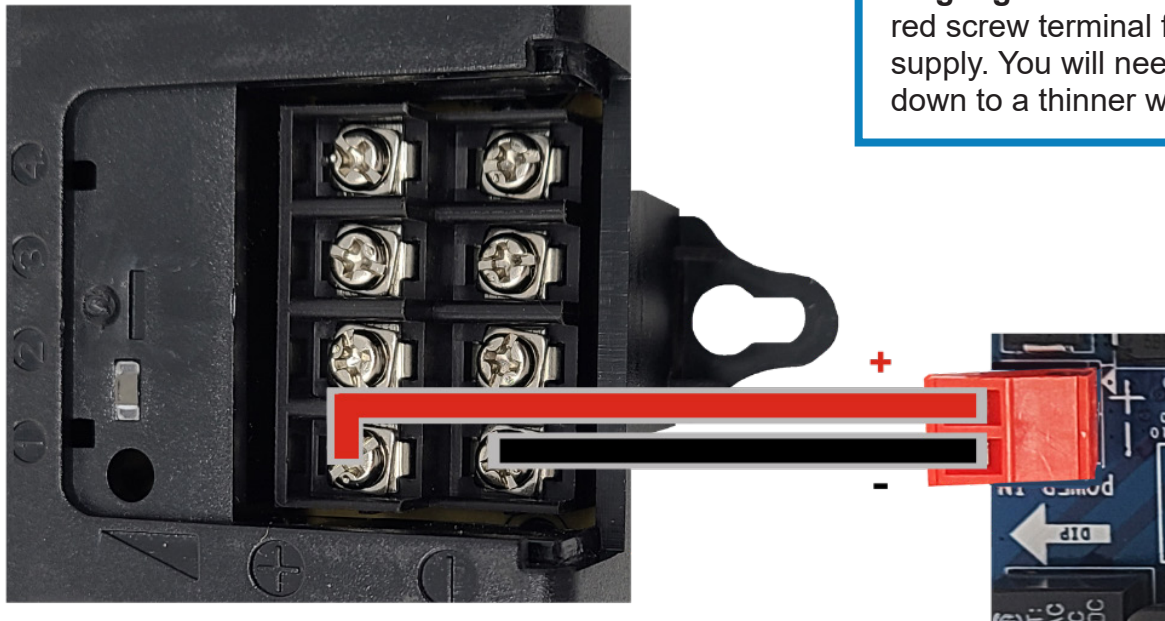
Required wiring: 6 conductor stranded and shielded for main device.
Pay attention to polarity. The system uses DC power.



Standard Power Wiring

Most devices will be powered using the (PWR-200) 12V DC 5 Amp Transformer.

Ensure you wire the positive to the + and negative to the -



12 gauge wire will not fit in the red screw terminal for the power supply. You will need to splice it down to a thinner wire.



Use the Type-B grounded plug that is supplied with the transformer.



For solar power wiring instructions, please contact CellGate.



Connection Type: Internet (Router)

For Use in WXL Version: AA1XLPE INT / AA1XLSM INT

Product ID: M730

WXL requires internet throughput of at least 1.5 megabytes per second.



- ← Plug customer's Internet into the blue port.
- ← Plug Watchman into any yellow port.
- ← Plug optional external cameras into any yellow port.

Internet router supports external cameras.
VPN does not.

Connection Type: VPN

For Use in WXL Version: AA1XLPE VPN / AA1XLSM VPN



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

In the image to the left, the black cord is the Ethernet extension cord.

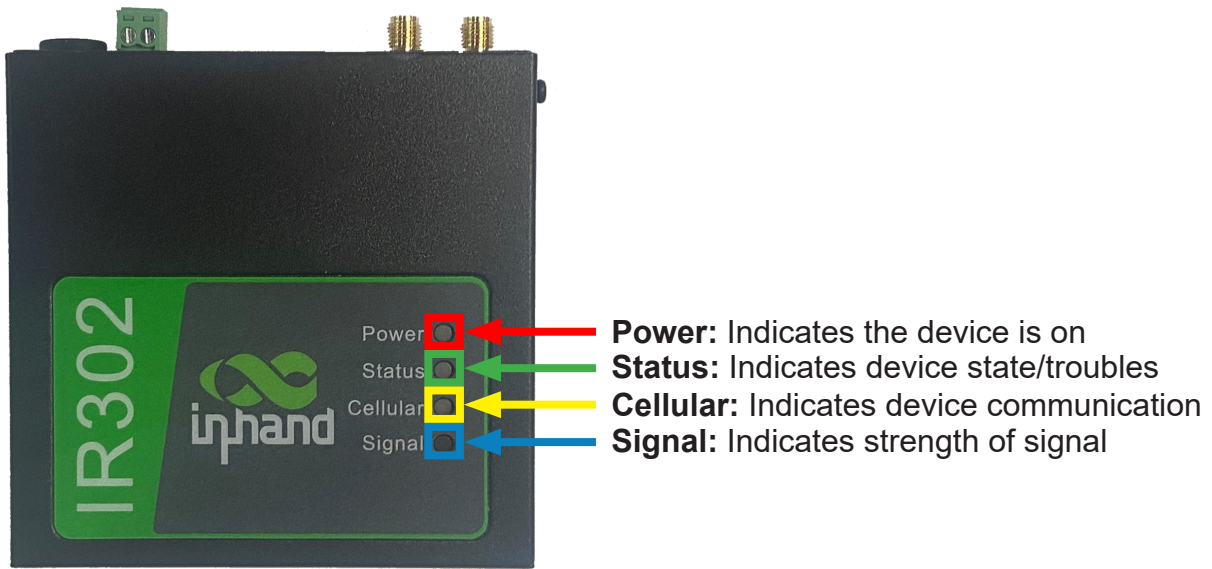




Connection Type: Cellular (InHand Router)

For Use in WXL Version: AA1XLPE-ATT / AA1XLSM-ATT / AA1XLPE-VZN / AA1XLSM-VZN

Product ID: M780



Power	Status	Cellular	Description
Off	Off	Off	Powered Off
On	Off	Off	System Failure
On	On	Off	Module or SIM Card Not Recognized
On	On	Blinking	Dialing
On	On	On	Dialing Success
On	Blinking	On	Upgrading
On	Blink > On	On	Reset

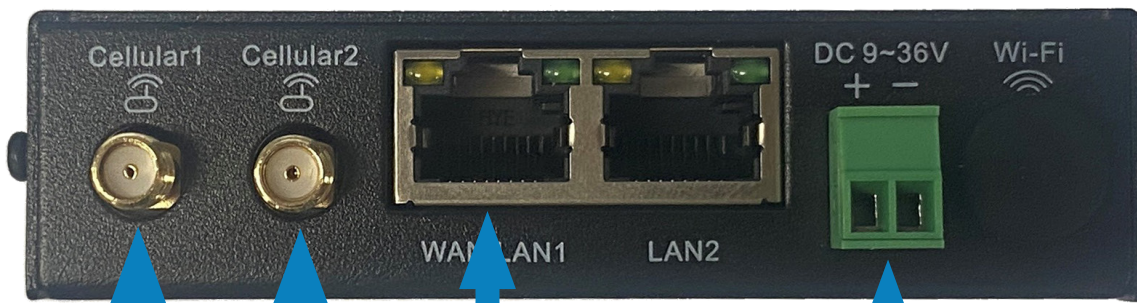
Signal	Description
Red	Signal 0 - 10 (Bad)
Yellow	Signal 11 - 20 (Decent)
Green	Signal 21 - 30 (Good)



Not for use with this device

Do not remove the SIM card tray unless specifically advised by tech support.

The SIM card tray contains both AT&T and Verizon SIM cards. They can only be swapped online by tech support.



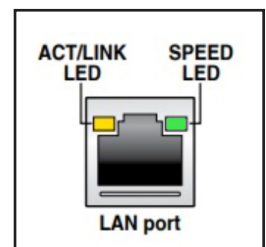
Cellular 1 & 2:
Directly connected to antenna

WAN / LAN1: Plugs into ethernet switch

Power Block: 12V DC is applied from main board

Activity	Description
Off	No Network Connection
On	Network Connection
Blinking	Network Activity

Speed	Description
Off	No Cell Connection
On	Cell Connection
Blinking	Cell Activity



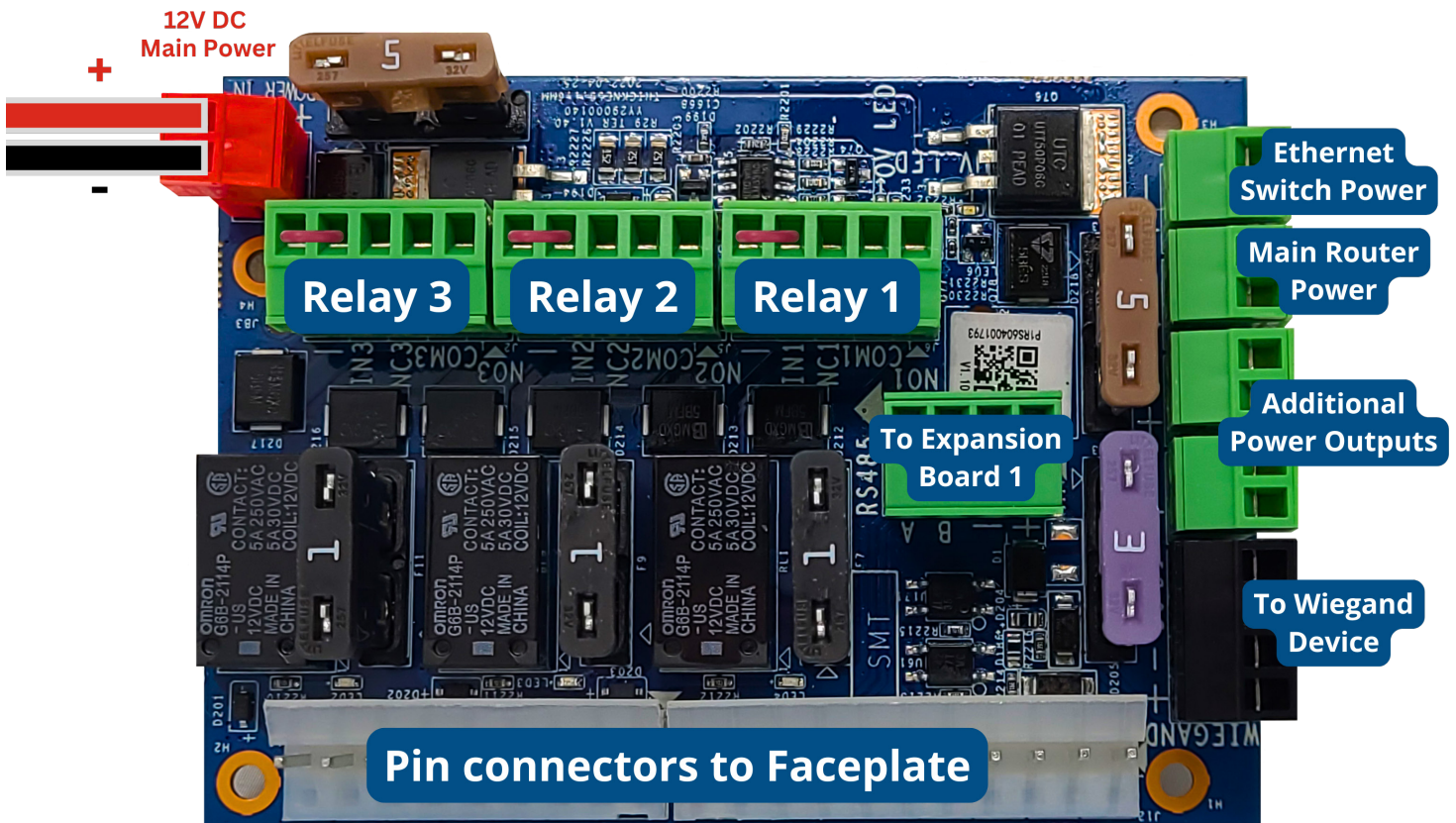


Blue Board

Below is the blue board inside the device. It provides power to the router and other accessories, such as cameras. It's also the central control interface between the faceplate and the router.

- Wire main power from transformer to the power connector on the blue board.
- Connect gate trigger wires from the Normally Open (NO) and Common (C) to the free exit or exit terminals on the gate operator.
- Connect the gate status wires on the 5-pin connector on the main relay and input plug to the magnetic switch or Dry Contact, Normally Closed (NC) relay on the gate operator.
- If using an optional 26-bit reader (keypad, card reader, RFID, or clicker), wire the device to the Wiegand connection on the blue board.
- Use the camera guide if adding an optional external camera.

Activate using test credentials on the Activation and Test Process document.





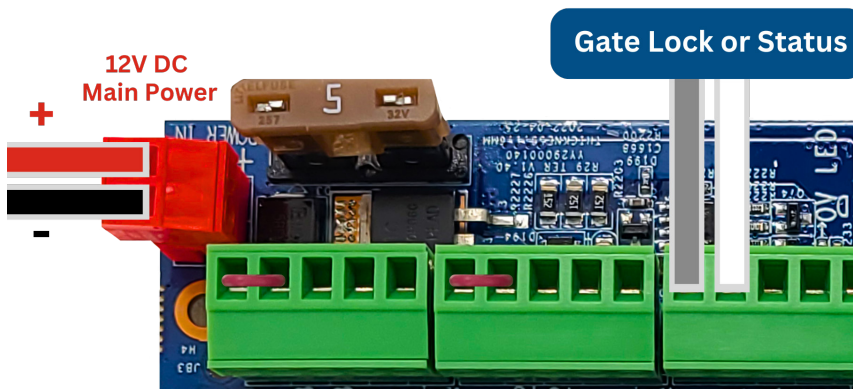
Wiegand Wiring



Required wiring: 18/4 conductor stranded and shielded for optional Wiegand devices.

Gate Status from a Gate Operator

You can monitor the status of the gate by wiring a dry contact output from the gate operator into an input on the blue board. You will likely need to program the output of the gate operator.

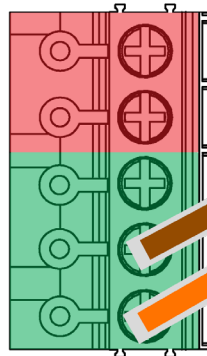


Warning: You must wire into a **DRY CONTACT** on the Gate Operator. Applying power to the input on the blue board will damage it.

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

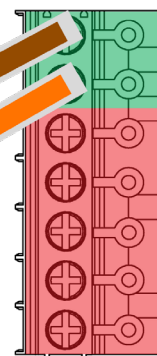
RELAY

INPUT -
INPUT +
NC
(Normally Closed)
COMMON
NO
(Normally Open)



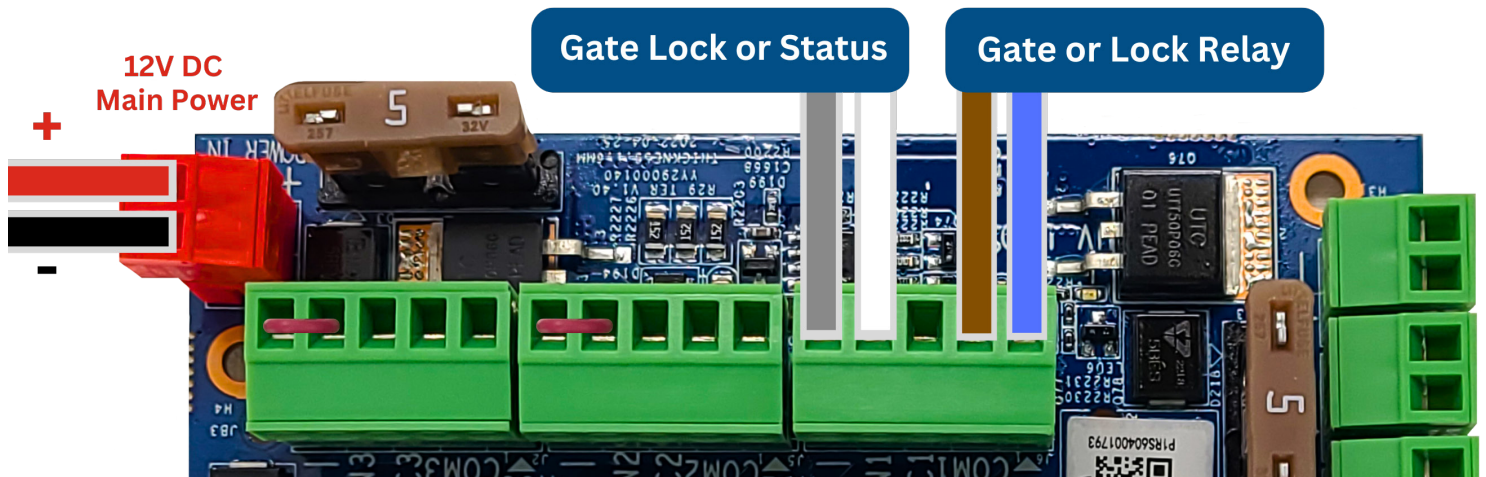
LOOPS

EXIT
SHADOW
INTERRUPT

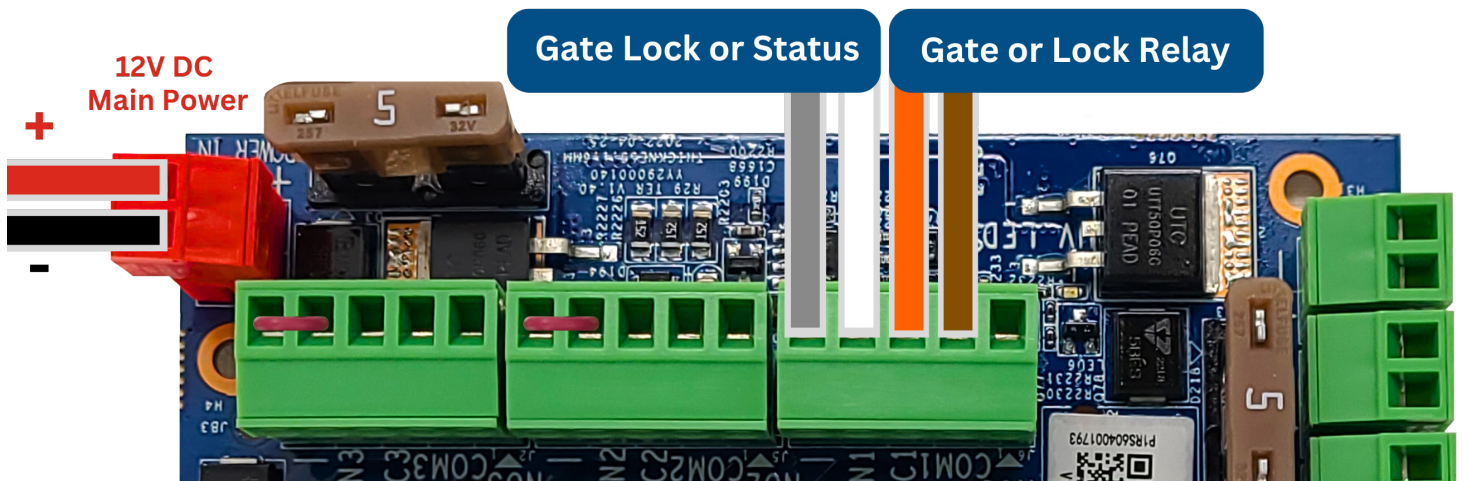




Dry Contact Relay, Normally Open



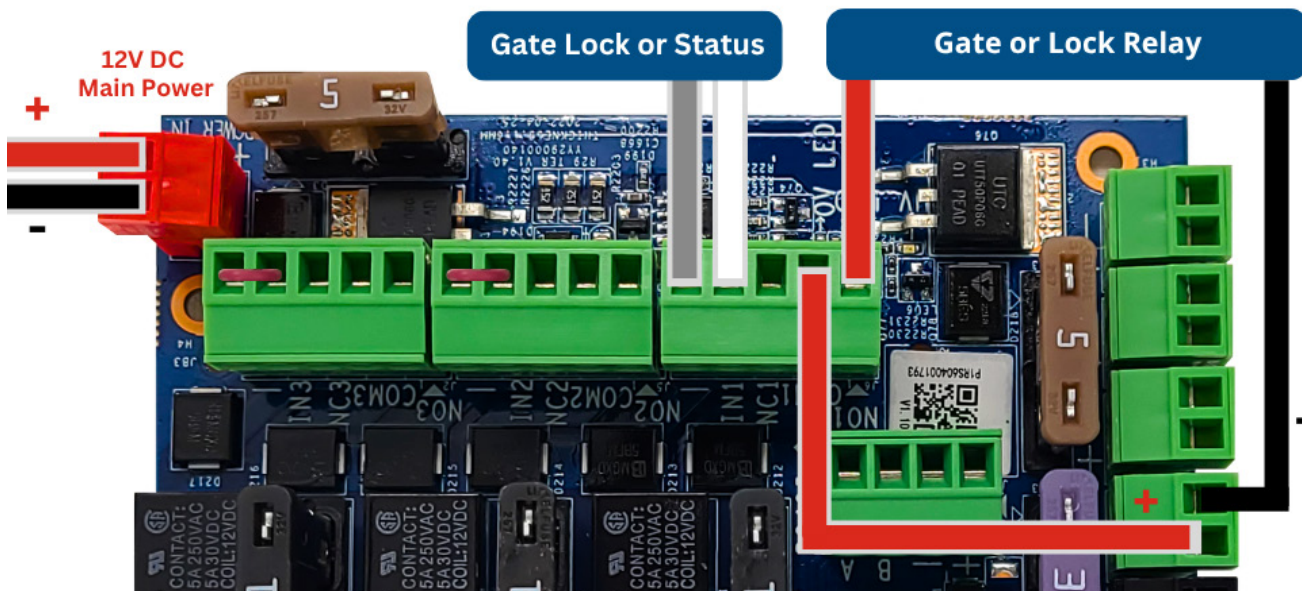
Dry Contact Relay, Normally Closed



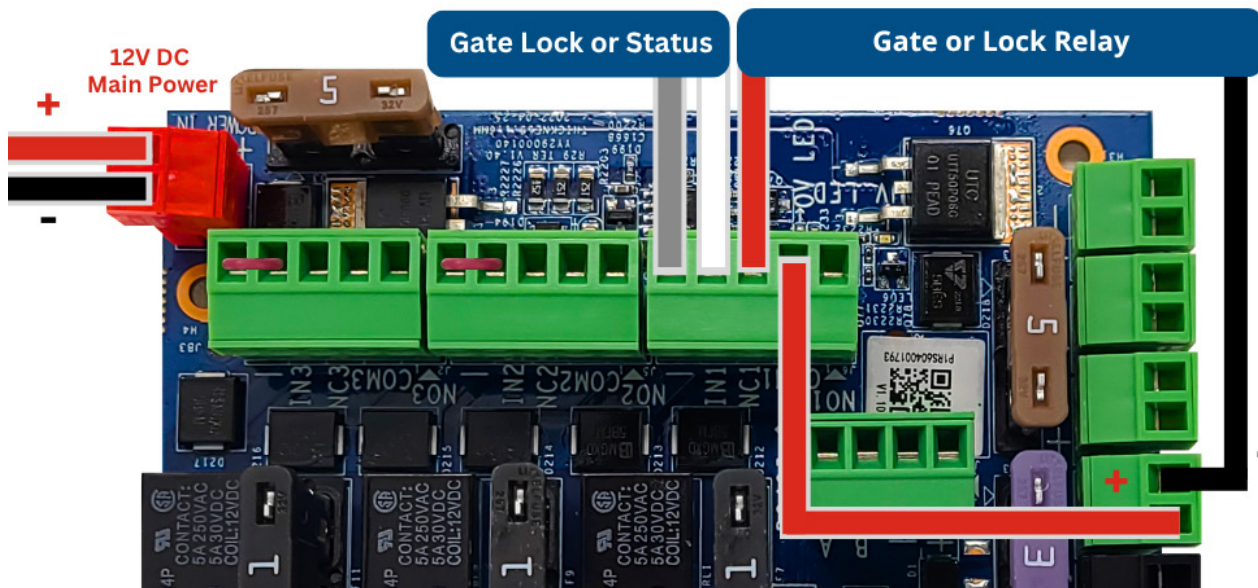


You must use a diode to maintain warranty. Contact CellGate for diode instructions.

Wet Contact Relay, Normally Open



Wet Contact Relay, Normally Closed



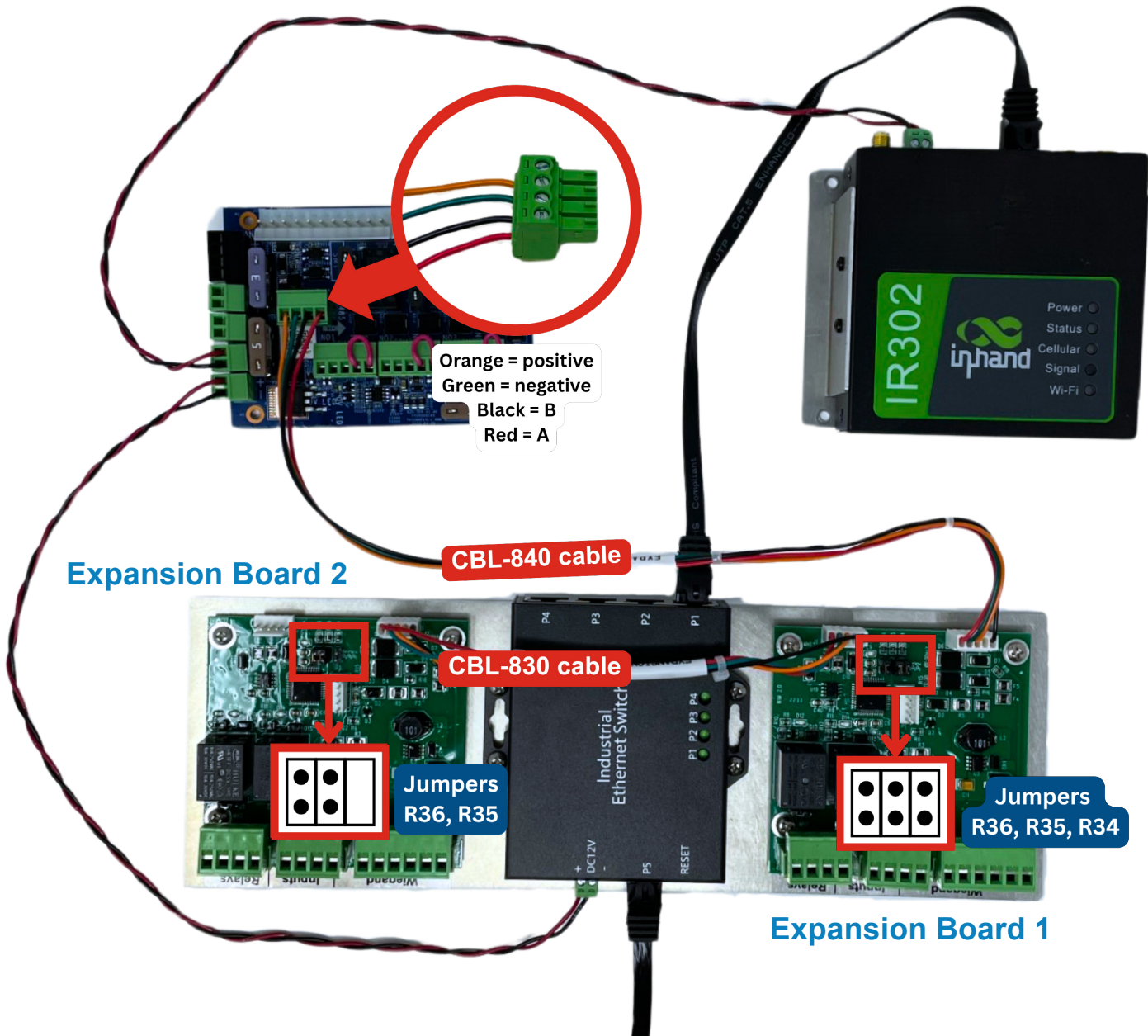


Expansion Boards Overview

In addition to the blue board, the WXL has two expansion boards. Each expansion board has:

- 2 additional relays
- 2 additional inputs
- 1 additional Wiegand connection

The expansion boards come pre-wired to the blue board's RS485 port as shown below.



Ensure the system is powered off before unplugging any cables, including **CBL-840** and **CBL-830**. Disconnecting these while powered on will damage the equipment.

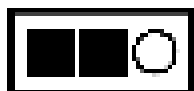


Relay Operation Configuration (Normally Open / Closed Settings)

Jumper configurations for Normally Open and Normally Closed are shown below. The jumpers can be found directly above the relays on the board.

By default, relays are Normally Open.

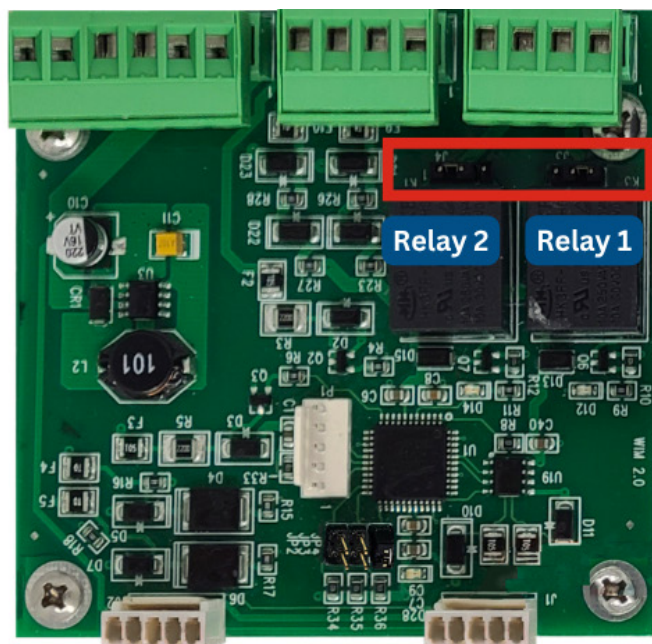
Normally Closed



Normally Open



Relay 1 and Relay 2 can be set independently. Their configurations are not dependent upon each other. When wiring the expansion board, ensure that the wiring matches the state of the relay.



Normally Closed

or



Normally Open

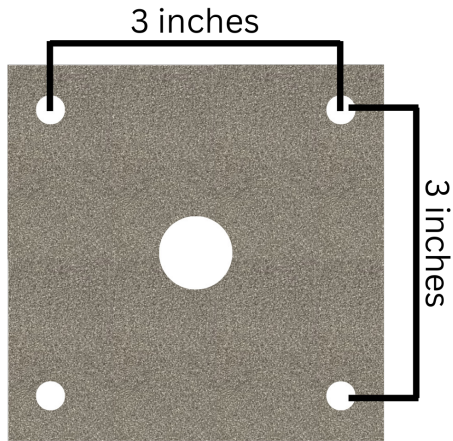
For a 12V Magnetic Lock, set the jumpers as shown above, whether Normally Open or Closed.



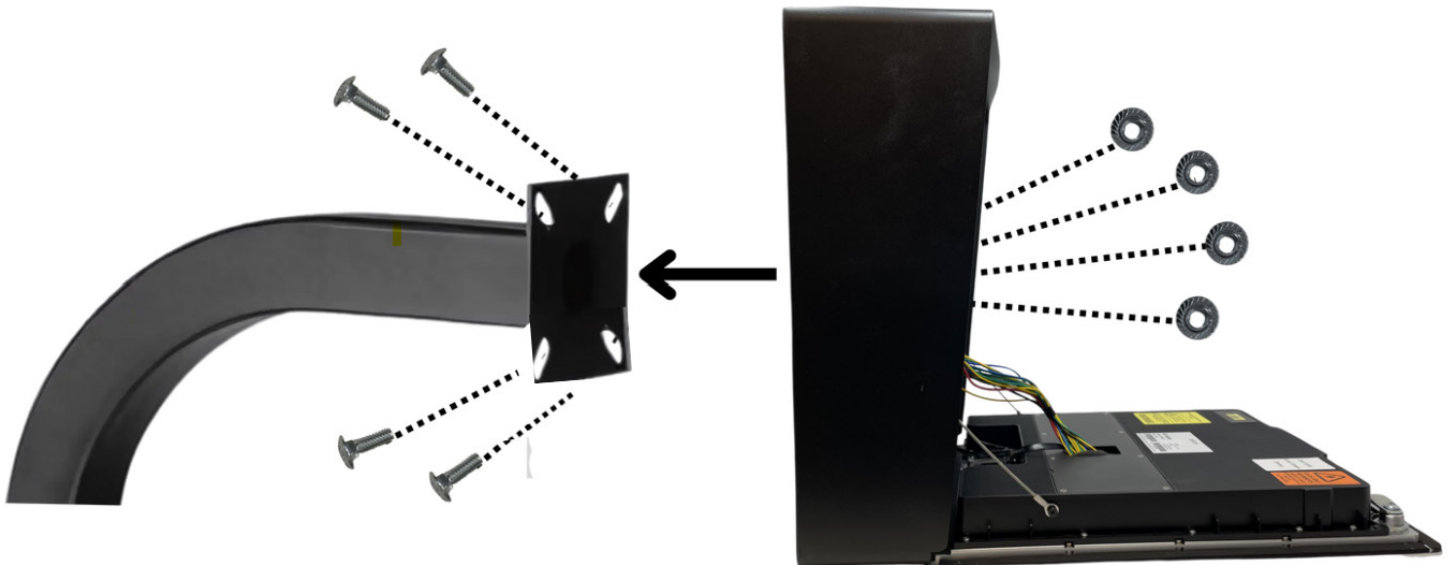
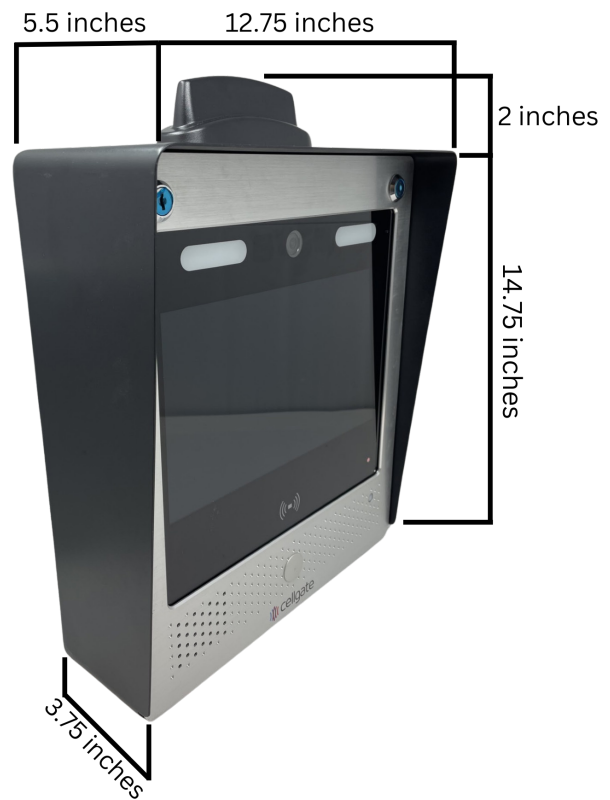
Do not adjust the **jumpers** while the device is powered on.



Mounting to a Pedestal

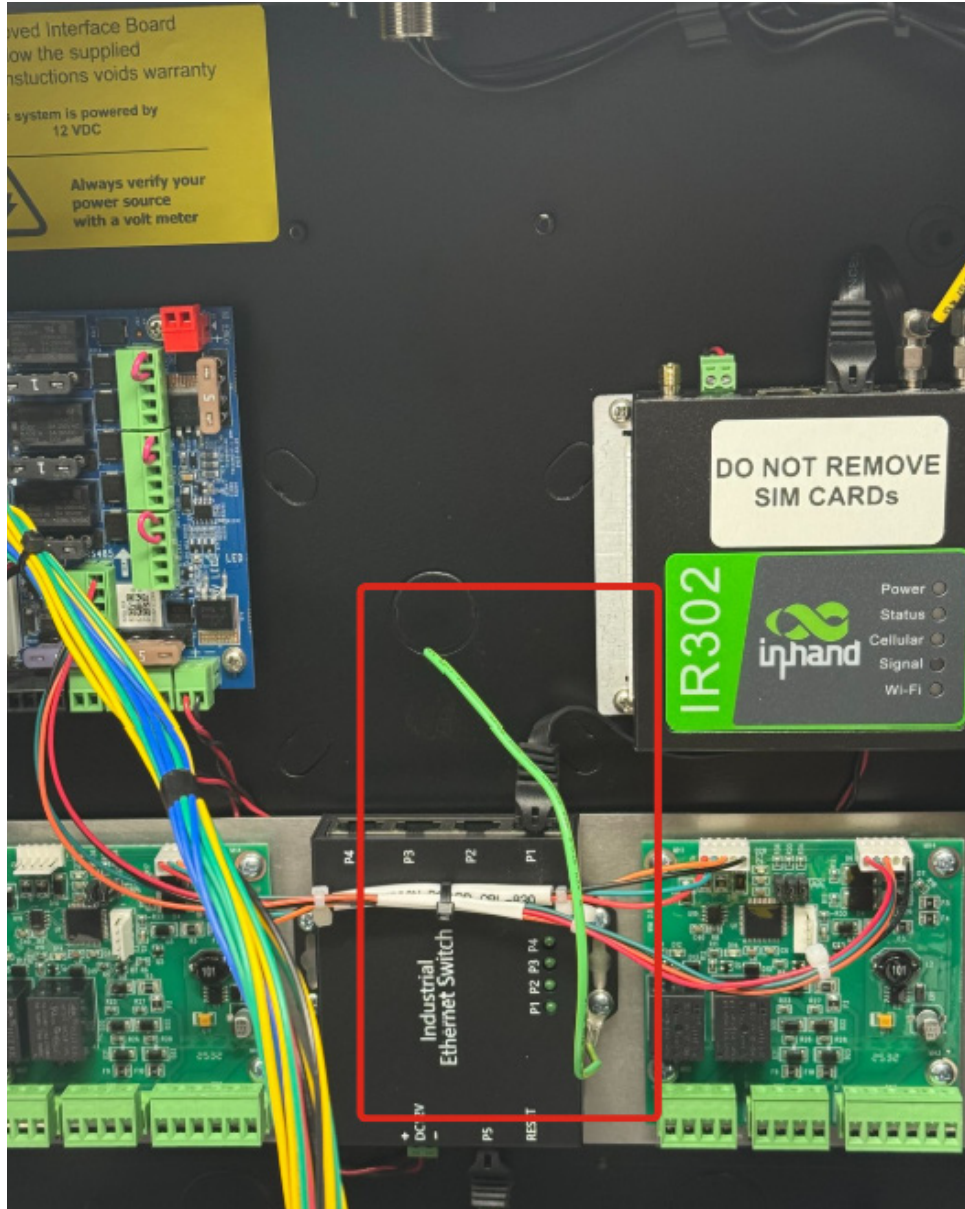


Corner holes are 5mm in diameter.
Gasket is already attached to the back of the device.





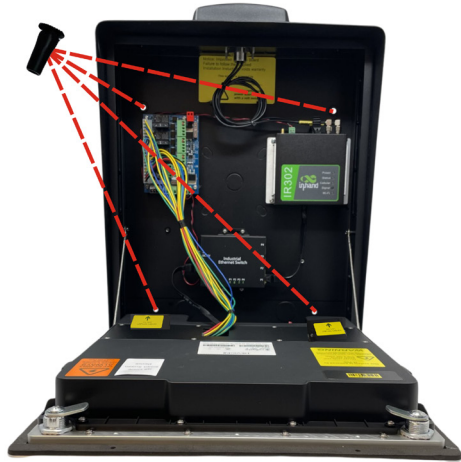
Device Grounding



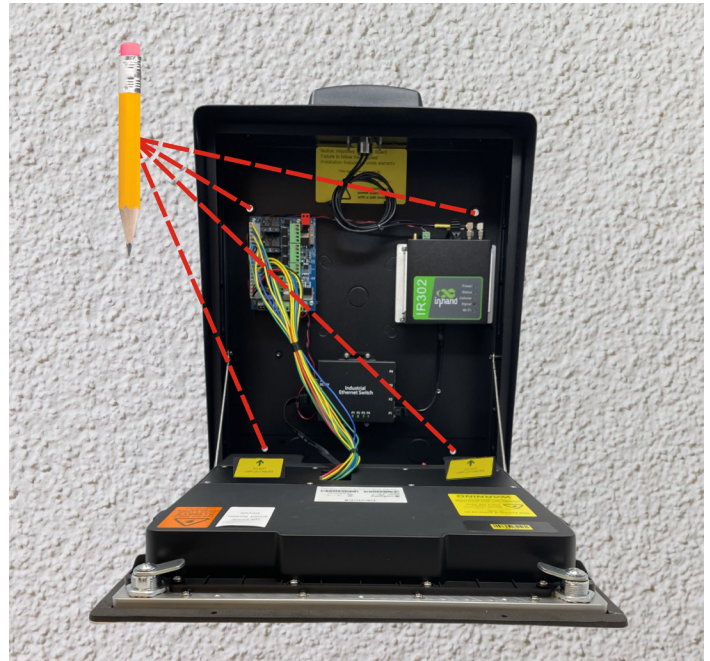
The device includes a pre-attached 16-gauge grounding wire that must be connected to an appropriate ground.



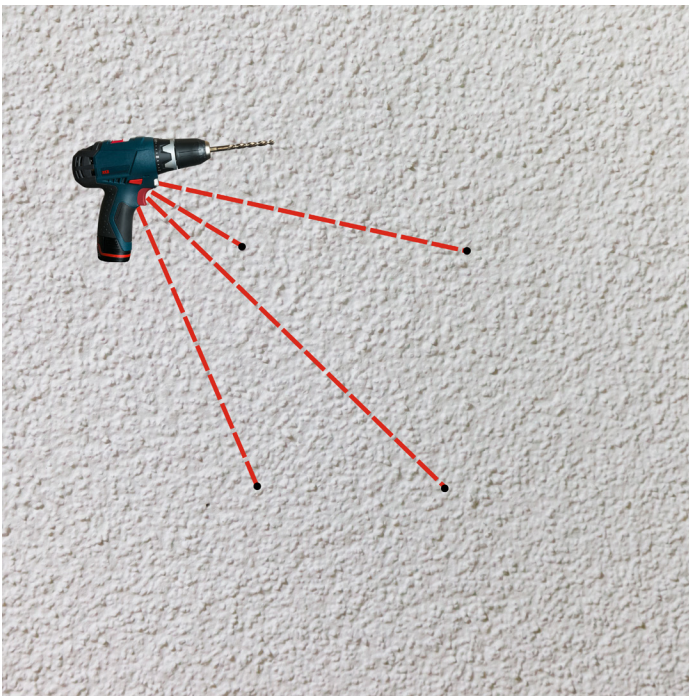
Mounting to a Surface



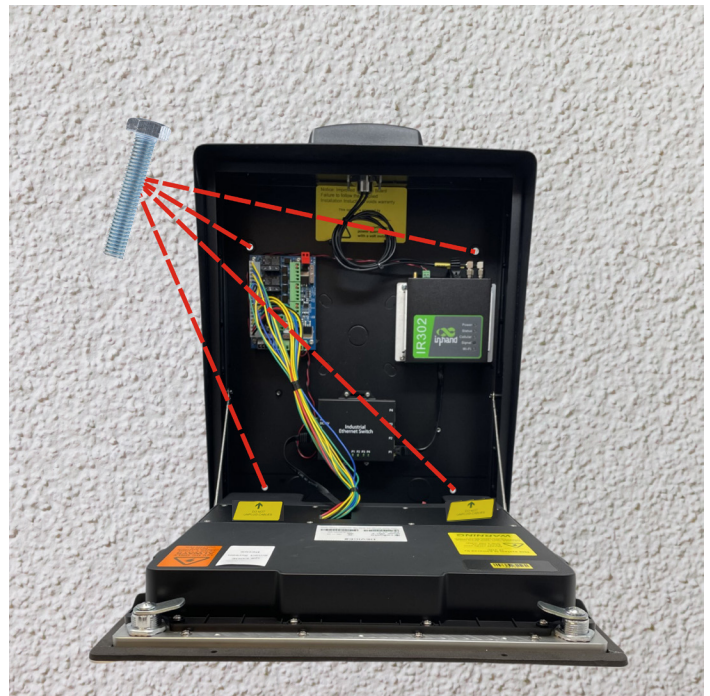
1. Remove the rubber plugs.



2. Place the device against the surface and mark the four holes.



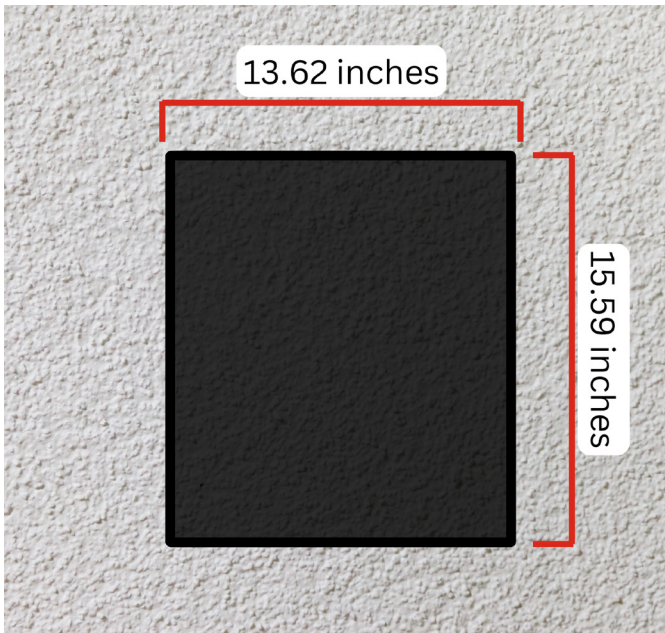
3. Drill four holes that are each two inches deep (size 1/4 drill bit).



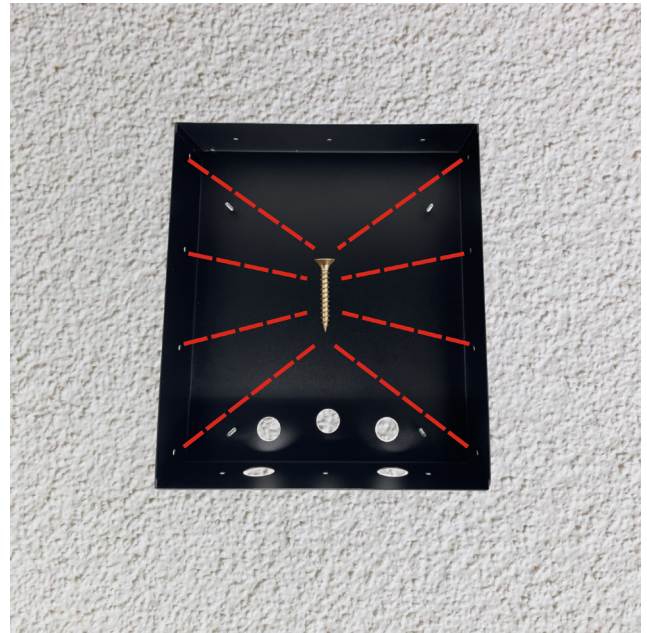
4. Place the device against the surface and fix four carriage bolts into the back. Close the device.



Flush Mounting



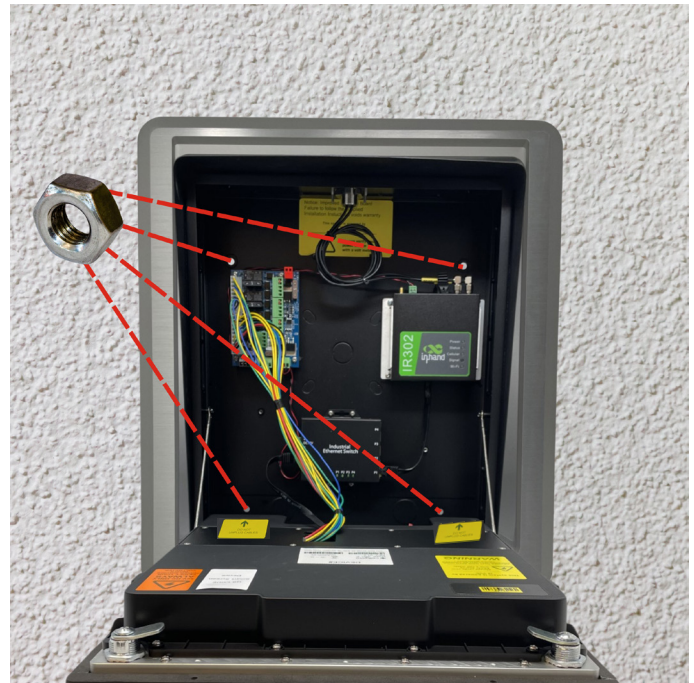
1. Cut a hole with the dimensions above and 3.78 inches deep. Put studs around the hole.



2. Place the black rough-in box into the hole. Attach the box to the studs with screws.



3. Place the steel enclosure into the black box.



4. Remove the rubber plugs from the device. Place the device into the steel enclosure and twist the nuts onto the four bolts. Close the device.