

Watchman 461 Installation Guide



Created October 2025





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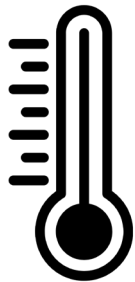
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Items Included

- Watchman 461 Unit
- Blue Board
- Connection Device: Ethernet Switch and InHand Router (cellular), Modem (internet)
- Outdoor Box / Indoor Box
- Power Supply: 12 Volt DC (indoor box), SMP 5 (outdoor box)
- Customer Information Packet



Operating Temperatures

-20° to 55° C
-4° to 131° F





Indoor & Outdoor Boxes

Be sure to use the correct box, whether indoor or outdoor.



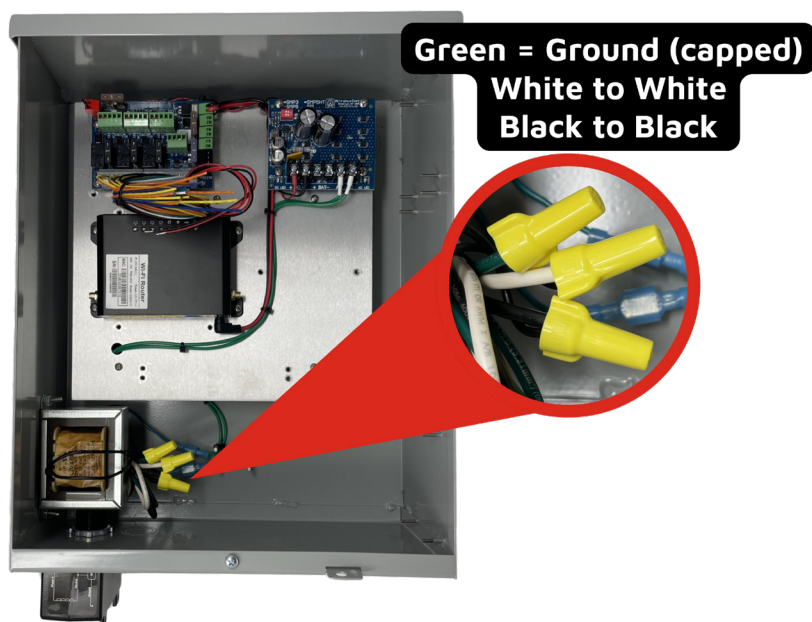
Indoor



Outdoor

Outdoor Box: Power Surge Protector

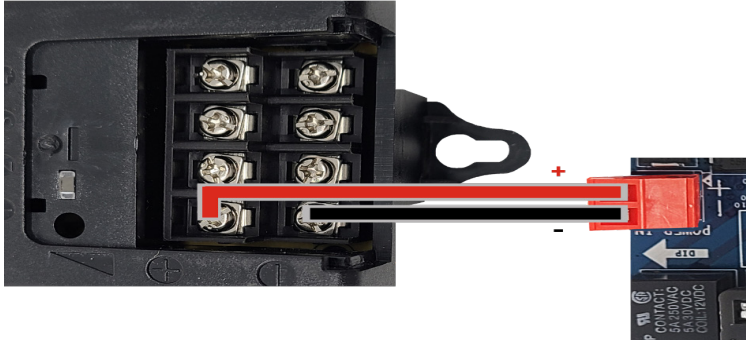
Wire the surge protector on the outdoor box as described below.





Indoor Box: Power Wiring

All devices using indoor boxes 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.

We do not recommend running wires over 60 feet.

Power Wiring Guidelines

Gauge Wire	Wire Run
18	25 feet
16	50 feet
12	60 feet

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



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



For solar power wiring instructions, please contact CellGate.



Connection Type: Internet Router

Internet router supports external cameras.

For Use in W461 Version:

AA1MSE-INT / AA1MSE-WP-INT

Product ID: M730

W461 requires internet throughput of at least 1.5 megabytes per second.

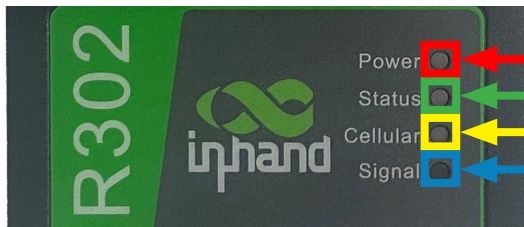


- ← Plug customer's Internet into the blue port.
- ← Plug Watchman into any yellow port.
- ← Plug optional external cameras into any yellow port.

Connection Type: Cellular (InHand Router)

For Use in W461 Version: AA1MSE-ATT / AA1MSE-WP-ATT / AA1MSE-VZN / AA1MSE-WP-VZN

Product ID: M780



- ← **Power:** Indicates the device is on
- ← **Status:** Indicates device state/troubles
- ← **Cellular:** Indicates device communication
- ← **Signal:** Indicates strength of signal

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

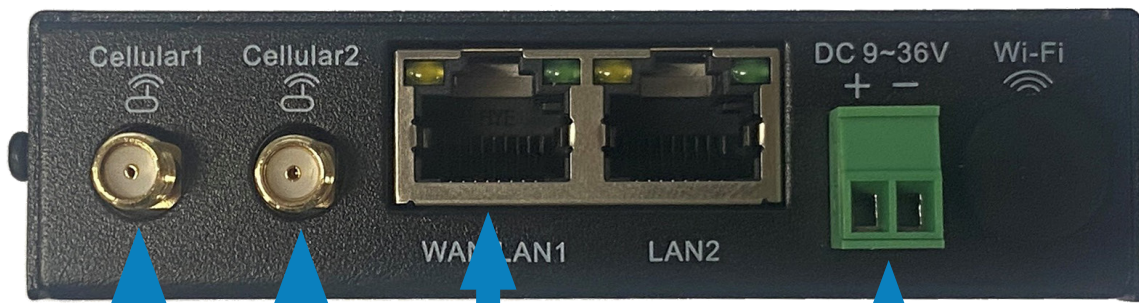
Signal	Description
Red	Signal 0 - 10 (Bad)
Yellow	Signal 11 - 20 (Decent)
Green	Signal 21 - 30 (Good)



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.



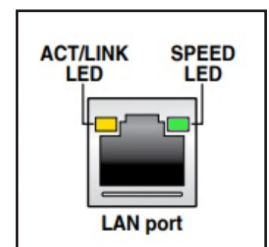
Cellular 1 & 2:
Directly connected to antenna

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



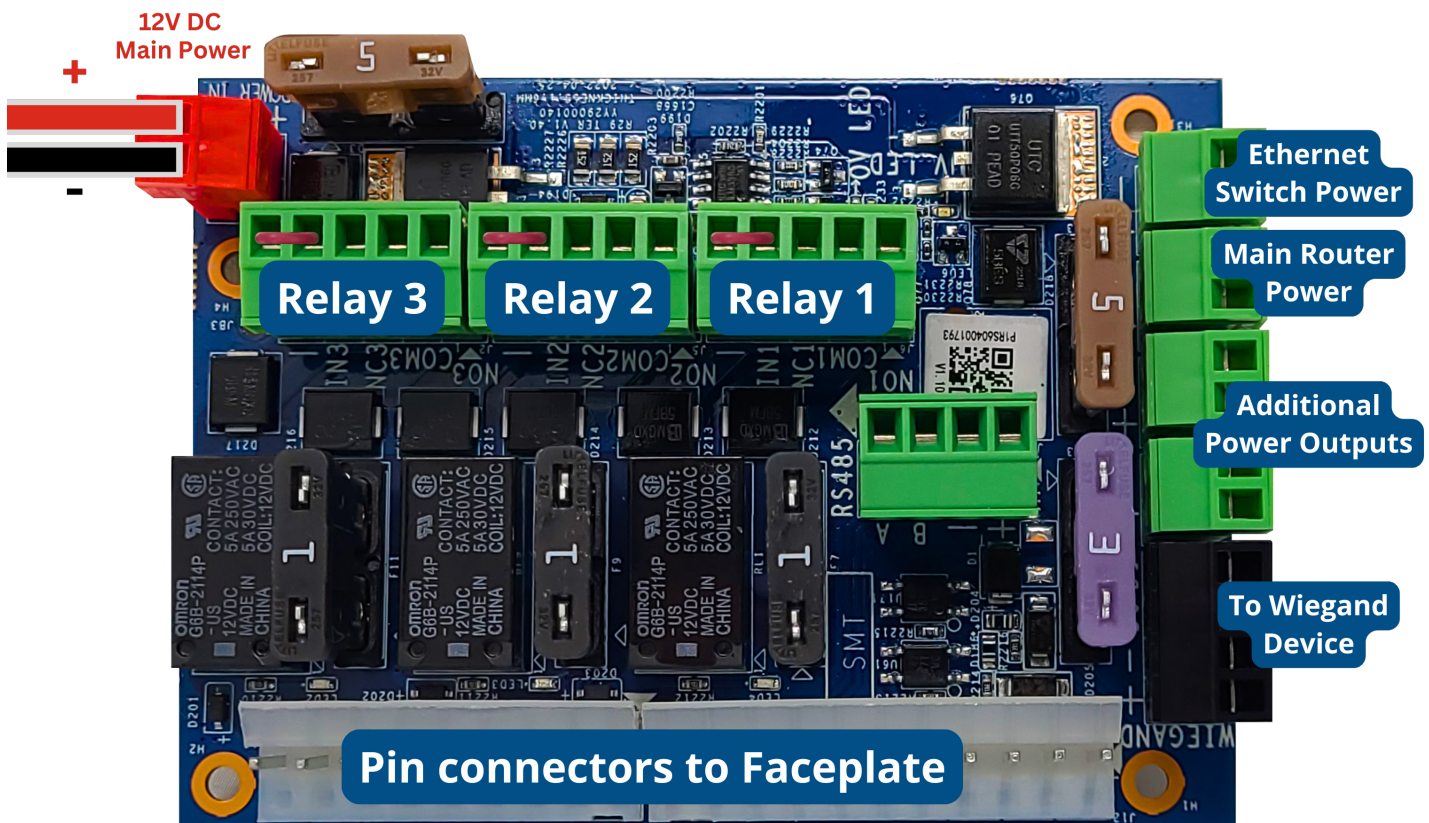


Blue Board

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.

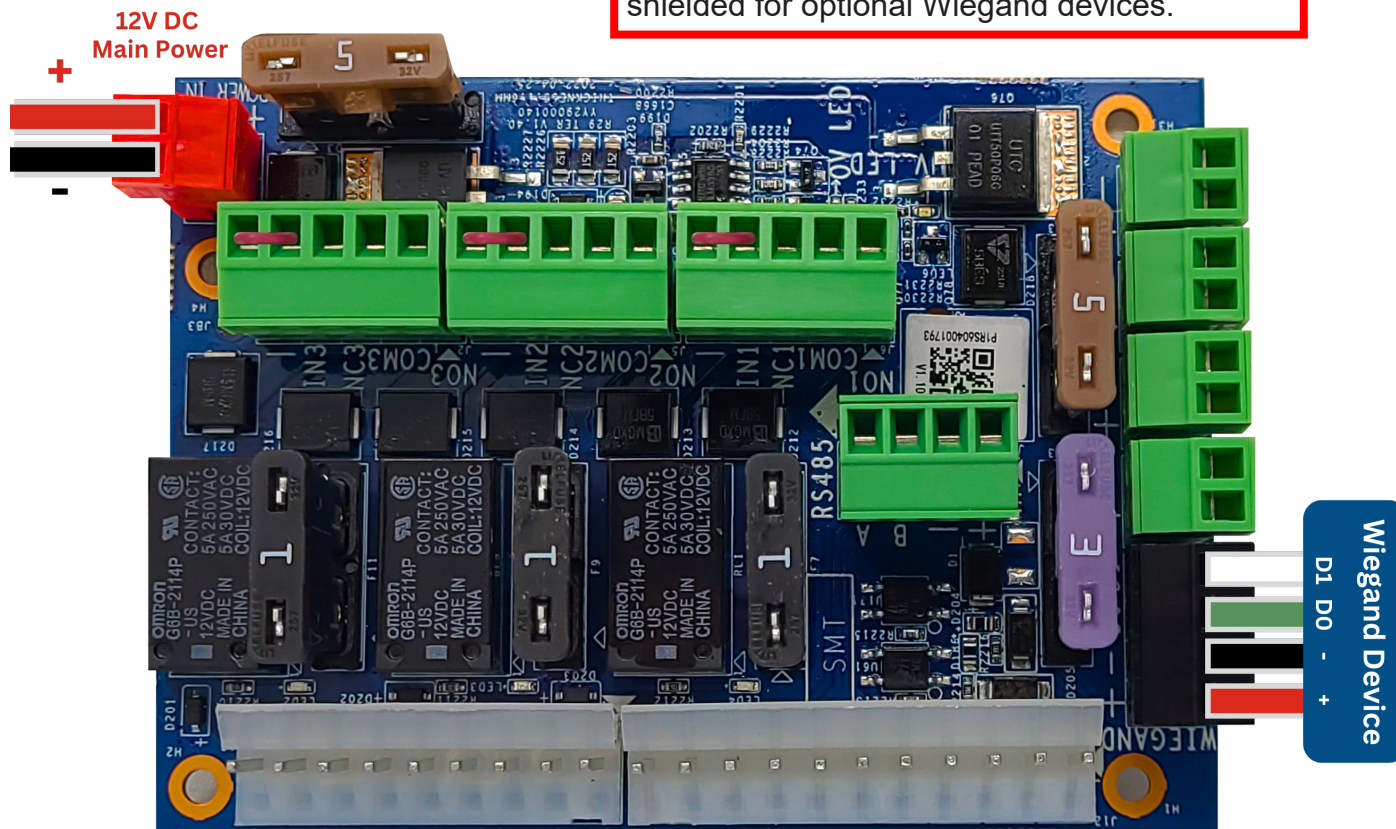
Activate using test credentials on the Activation and Test Process document.





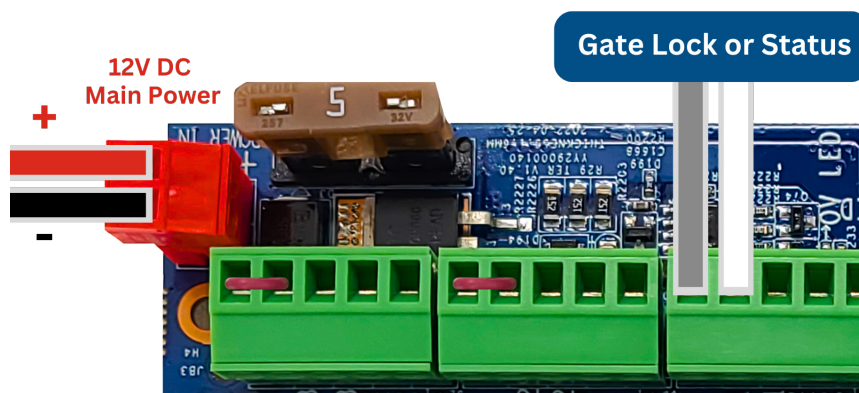
Wiegand Wiring

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.

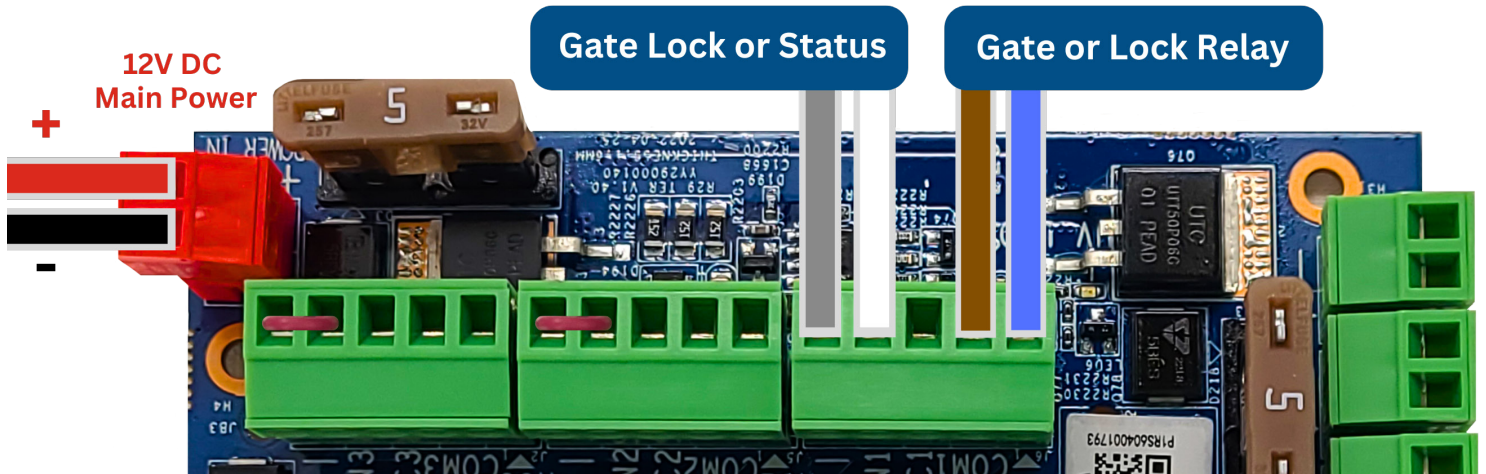


Warning: You must wire into a **DRY CONTACT** on the Gate Operator. Applying power to the input on the blue board will damage it.

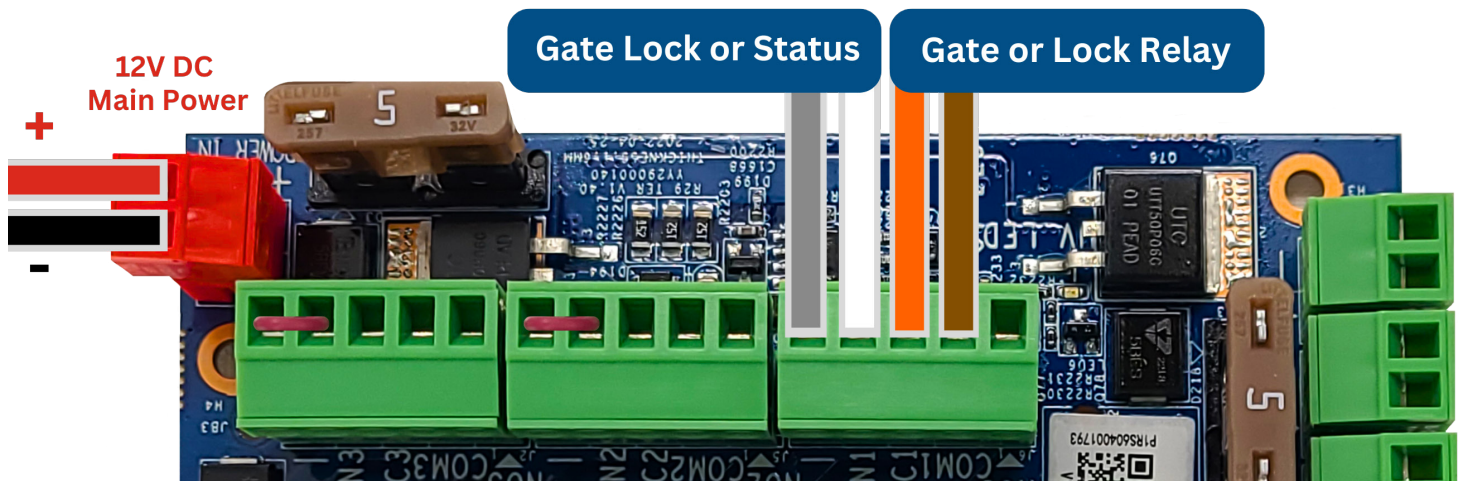
Gate statuses can be inverted. If needed, please call CellGate to invert.



Dry Contact Relay, Normally Open



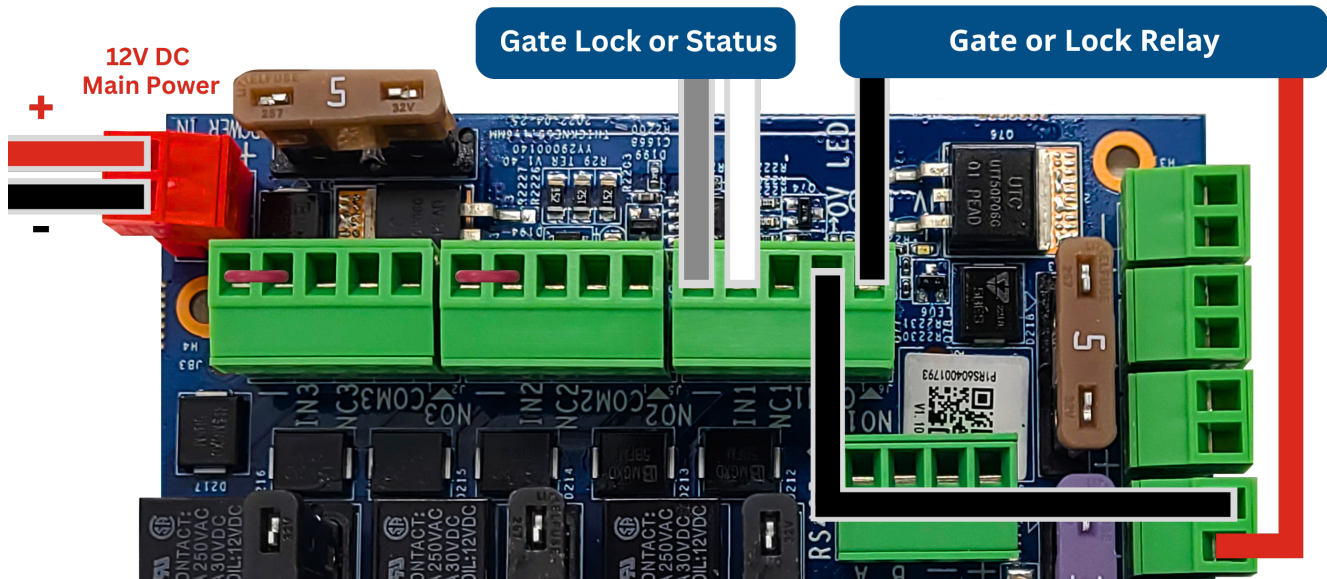
Dry Contact Relay, Normally Closed



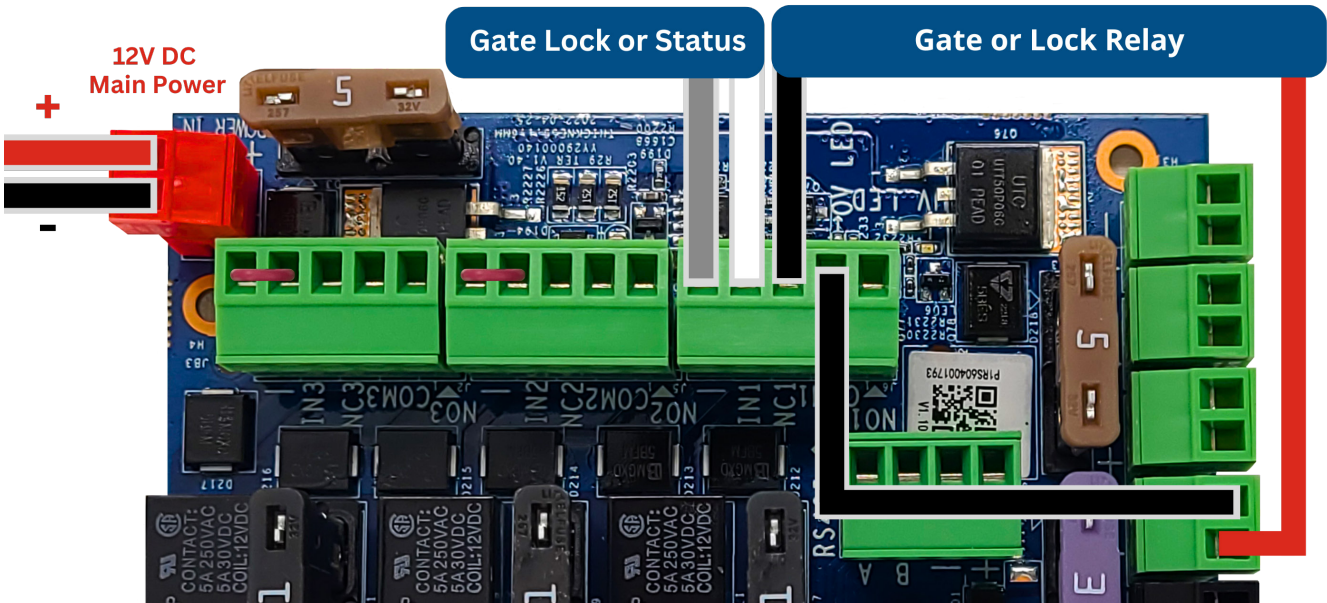


You must use a diode to maintain warranty. Contact CellGate for diode instructions.

Wet Contact Relay, Normally Open

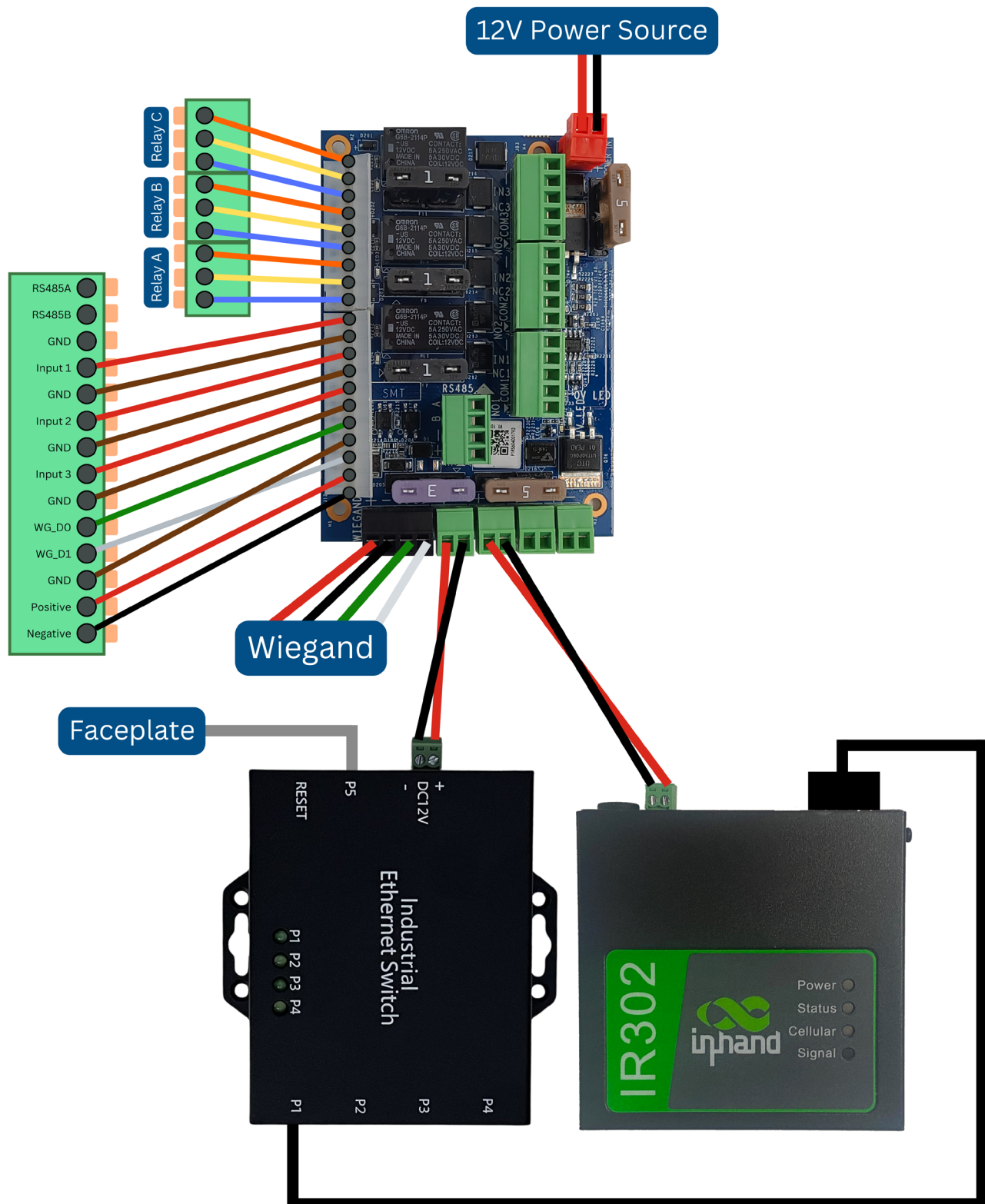


Wet Contact Relay, Normally Closed





Blue Board Wiring Diagram



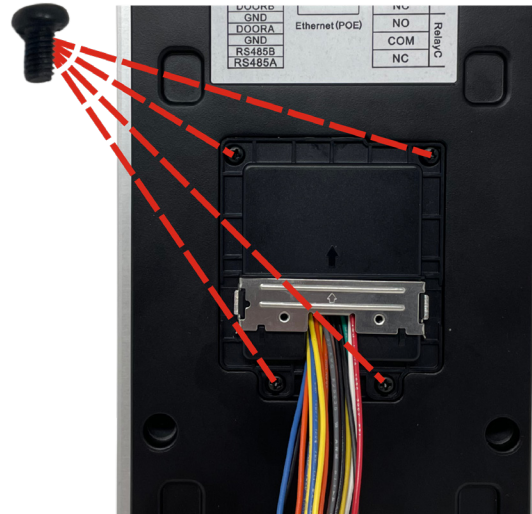


Pre-Mounting: Black Enclosure

Before mounting the device, attach the black enclosure over the wires. This protects against water damage and other debris entering the device.



1. Push the ethernet cable through the hole, followed by the wires.



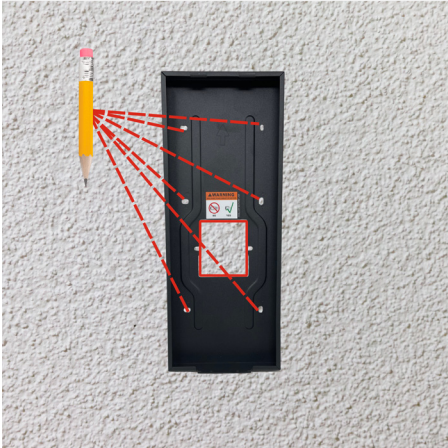
2. Press the enclosure onto the back of the device. Insert the four screws with rounded heads into the enclosure.



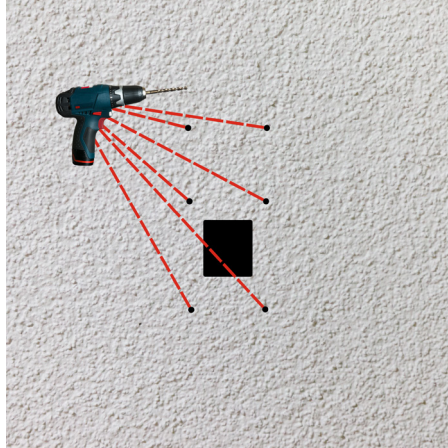
3. Be sure to press the metal crossbar onto the device. No tools are needed.



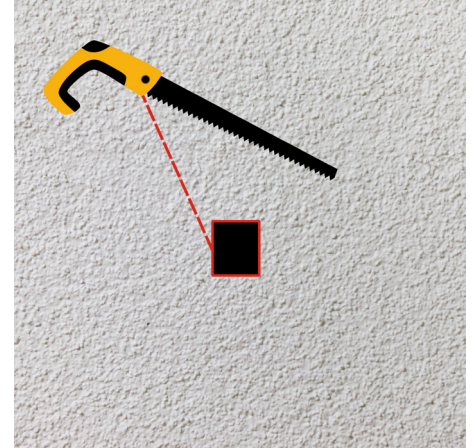
Surface Mounting



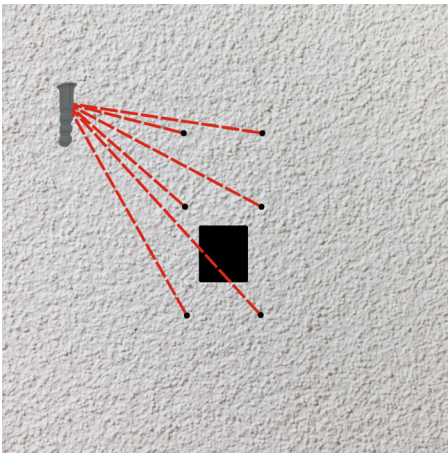
1. Place the back plate onto the wall. Use a pencil to mark the six screw holes and the square hole.



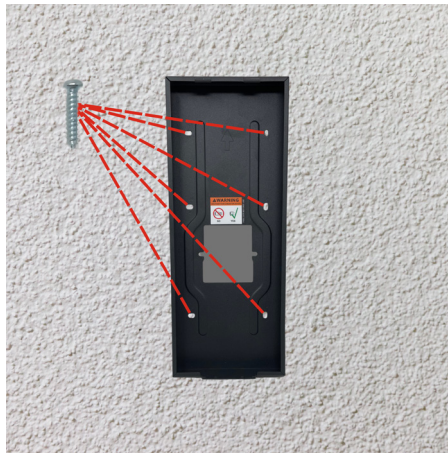
2. Use a drill for the screw holes (size 3/16 drill bit).



3. Cut the square hole.



4. Insert the plastic plugs into the screw holes.



5. Place the back plate onto the wall and attach the six screws.

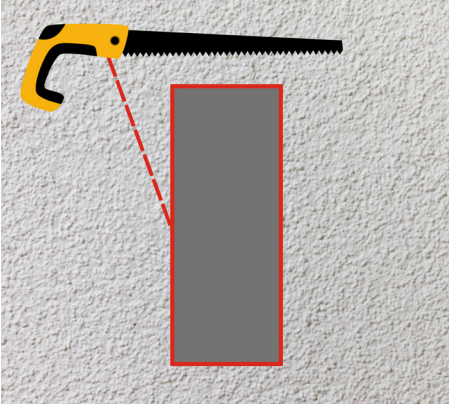


6. Place the device into the back plate. Be sure to push the wires through the square hole. Insert the flat-headed screws into the bottom.

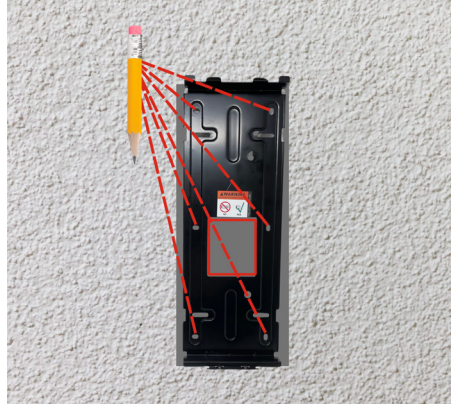


Flush Mounting

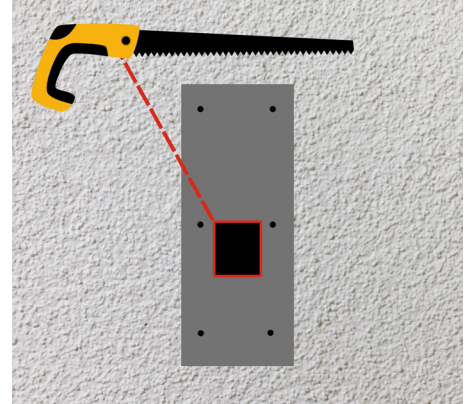
A flush mount can be used for walls that are at least 3 inches thick.



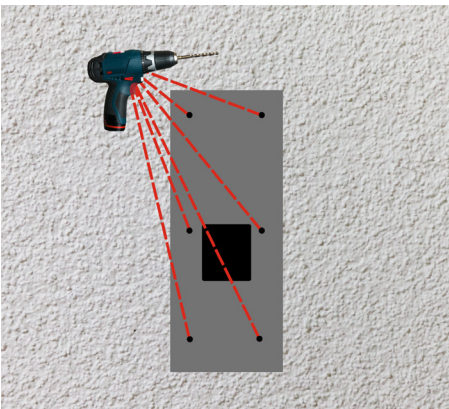
1. Cut a hole 4 and 5/8 inches wide, 12 inches high, and 1.5 inches deep.



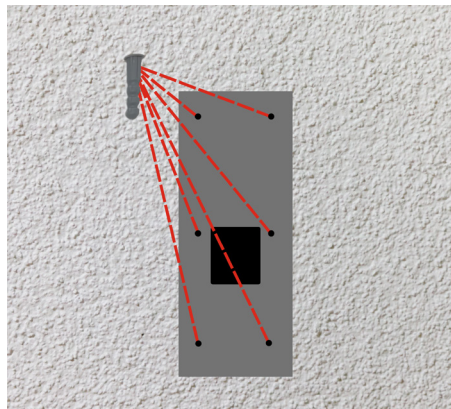
2. Place the back plate into the hole. Mark the six screw holes and the square wiring hole.



3. Cut the wiring hole.



4. Drill the screw holes (size 3/16 drill bit).



5. Insert the plastic plugs into the screw holes.



6. Place the back plate into the wall and attach the six screws.



7. Place the device into the back plate. Be sure to push the wires through the square hole. Insert the flat-headed screws into the bottom.