



OmniPoint

Entry Point Module (EMP) v1 Install Guide

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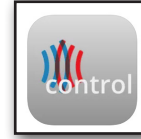
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Overview

The OmniPoint Entry Point Module (EPM) is a wireless device that receives commands from the Gateway to provide access point control to doors and gates. It can also interact with 26-bit Wiegand devices.

Downloading the CG Installer Control App

If you have not yet, download the “CG Installer Control” app to your smartphone. Search for “CG Installer Control” in the iOS App Store or Google Play Store, and download the app.



For iPhones, scan this QR code to download the CG Installer Control app from the App Store.



For Androids, scan this QR code to download the CG Installer Control app from the Google Play Store.



Wiring Instructions

Relevant Terms

Main Power: The main power input for the circuit; 12 V DC or 24 V AC. The EPM is not polarity sensitive for incoming power.

Wet Relay Connector: Power is supplied by the main power source. The wet relay outputs the same voltage as input, e.g., 12 V DC in, 12 V DC out **or** 24 V AC in, 24 V AC out.

Dry Relay Connector: A source other than the EPM's main power source supplies power. When closed, current flows through the contact. When the dry contact is open, no current flows through the contact.

Wiegand Connection: The 26-bit Wiegand circuit reads the user's credentials and determines whether to allow or deny access. Power output is always 12 V DC.

Input 1: Gate or door status.

Input 2: Gate or door status; includes Request to Exit (REX) built in by default.

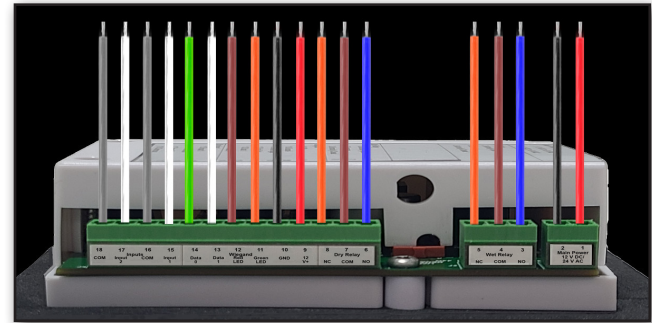
EPM
Front



EPM
Back



EPM Wiring

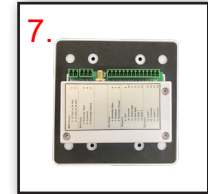
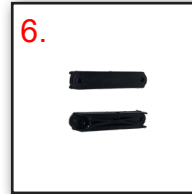
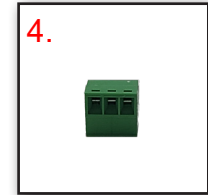
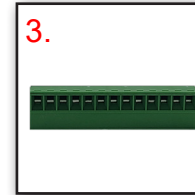
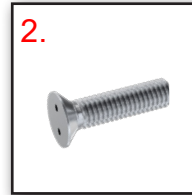


Shipping Contents

EPM with Internal Antenna

Part #: OP EPM DG

1. Flathead Screws (x4)
2. Security Screws (x4)
3. 13-pin Connector (x1)
4. 3-pin Connector (x1)
5. 2-pin Connector (x1)
6. Shims (x2)
7. OmniPoint EPM (x1)



Front

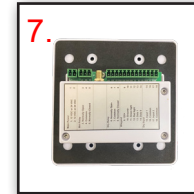
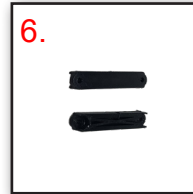
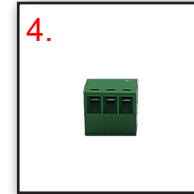
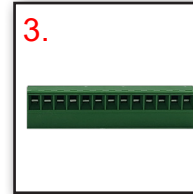
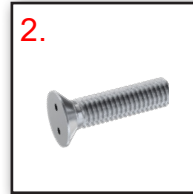
Back

Shipping Contents

EPM with External Antenna

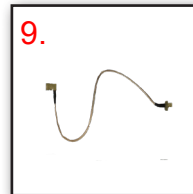
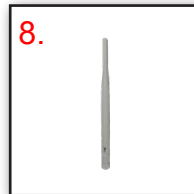
Part #: OP EPM DG EXT

1. Flathead Screws (x4)
2. Security Screws (x4)
3. 13-pin Connector (x1)
4. 3-pin Connector (x1)
5. 2-pin Connector (x1)
6. Shims (x2)
7. OmniPoint EPM (x1)
8. External Antenna (x1)
9. Connector Cable (x1)



Front

Back

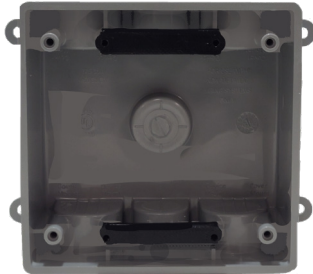


Required Purchase

Outdoor and Indoor External Antenna Installs

You **must** purchase an external box if you plan to install OmniPoint outdoors or if you install OmniPoint with an external antenna indoors. Below you will find the product info, and links to purchase the box.

Two-Gang gray weatherproof box with
four 3/4 in. and three 1/2 in. holes



Home Depot Product Information:

- Internet #300851103
- Model #WDB750PG
- Store SKU #497014
- [Home Depot Product Link](#)

Product QR Code link



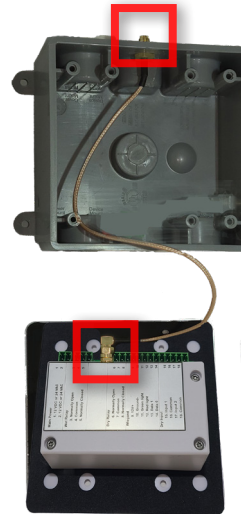
Outdoor Installation

EPM with External Antenna

1. Drill a hole into the top of the two-gang box as shown below.



2. Run the end of the cable with the straight connector through the drilled hole. Secure with the capture nut.

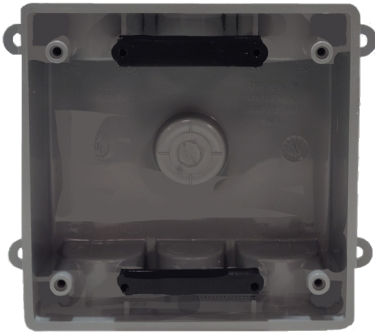


3. Attach the other end of the cable to the OmniPoint EPM.

Outdoor Installation

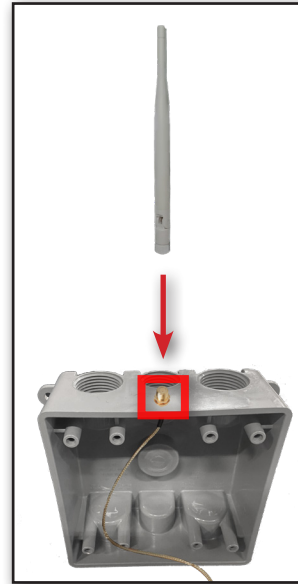
EPM with External Antenna

4. Attach shims to box to seal box.
This prevents weather damage.



Note: Connect the external antenna *before* you connect the power to the device.

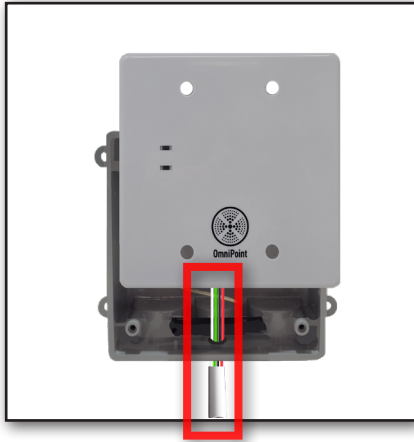
5. Attach the antenna to the stud on the two-gang box. Weatherproof it using silicone sealant.



Outdoor Installation

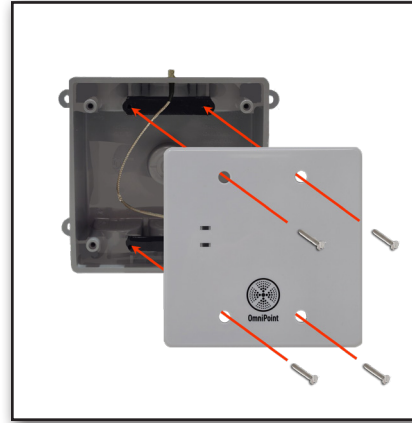
EPM with External Antenna

6. Run all wires from the EPM through the bottom or back of the box. Use conduit outside of the device.



Note: You must weather-proof the antenna and cable connections. $\frac{3}{4}$ inch conduit fitting is recommended.

7. Attach the OmniPoint EPM to the external box with either flathead or security screws, based on your preference.



Note: Glue the conduit into a $\frac{3}{4}$ in. standard fitting liquid-tight connector with PVC glue.

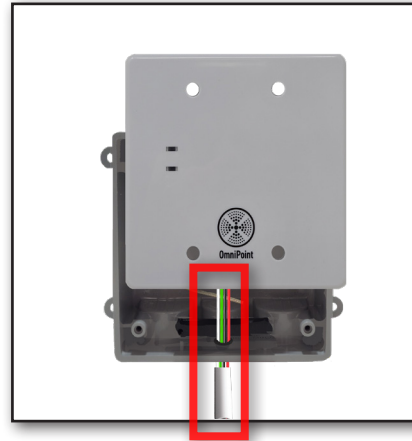
Outdoor Installation

EPM with Internal Antenna

1. Attach shims to box to seal box.
This prevents weather damage.



2. Run all wires from the EPM through the bottom or back of the box. Use conduit outside of the device.

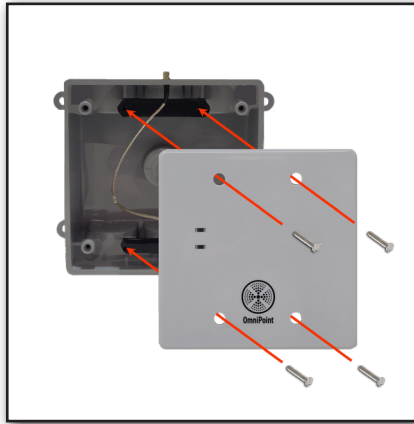


Note: Glue the conduit into a 3/4 in. standard fitting liquid-tight connector with PVC glue.

Outdoor Installation

EPM with Internal Antenna

3. Attach the OmniPoint EPM to the external box with either flathead or security screws, based on your preference.



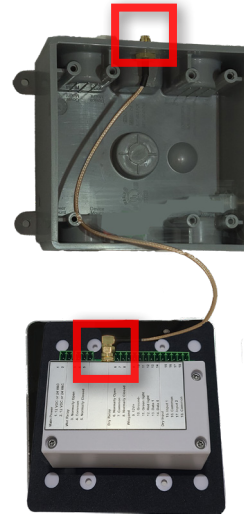
Indoor Installation

EPM with External Antenna

1. Drill a hole into the top of the two-gang box as shown below.



2. Run the end of the cable with the straight connector through the drilled hole. Secure with the capture nut.

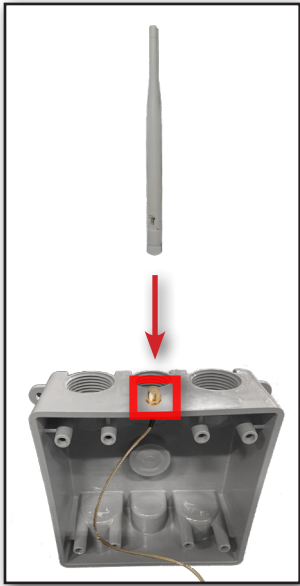


3. Attach the other end of the cable to the OmniPoint EPM.

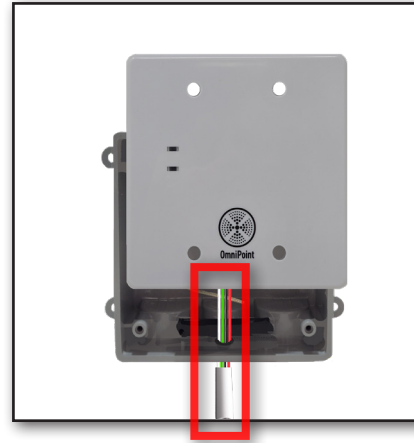
Indoor Installation

EPM with External Antenna

4. Attach the antenna to the stud on the two-gang box. Weatherproof it using silicone sealant.



5. Run all wires from the EPM through the bottom or back of the box. Use conduit outside of the device.

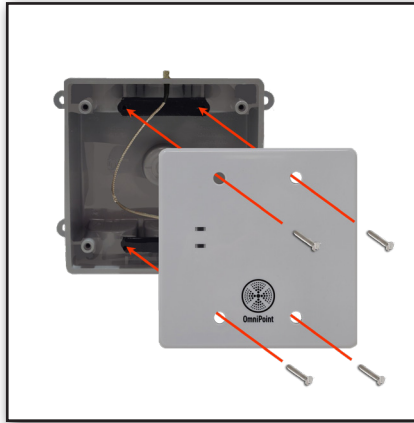


Note: Connect the external antenna *before* you connect the power to the device.

Indoor Installation

EPM with External Antenna

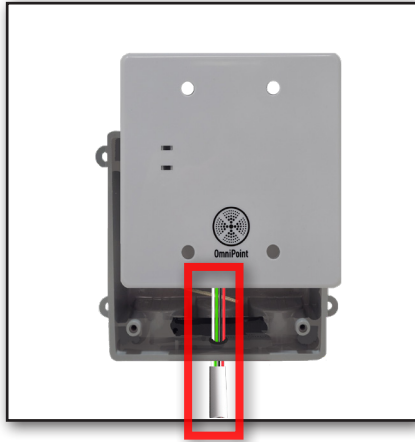
6. Attach the OmniPoint EPM to the external box with either flathead or security screws, based on your preference.



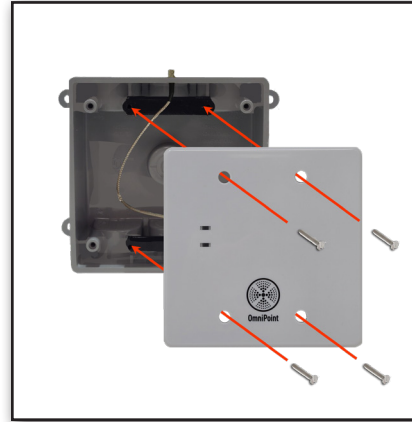
Indoor Installation

EPM with Internal Antenna (Wall Mount)

1. Run all wires from the EPM through the bottom or back of the box. Use conduit outside of the device.



2. Attach the OmniPoint EPM to the external box with either flathead or security screws, based on your preference.

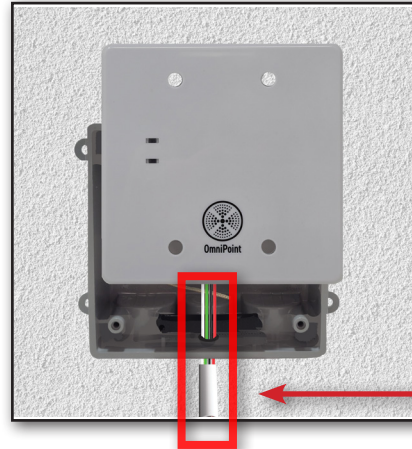


Note: You must weather-proof the cable connections.
3/4 inch conduit fitting is recommended.

Indoor Installation

EPM with Internal Antenna (Flush Mount)

1. Make a hole in the wall for your OmniPoint device. Place the two-gang mounting bracket in the hole.
2. Run all wires from the EPM through the bottom or back of the box. Use conduit while wiring into the wall.



Wires and conduit go inside the wall.

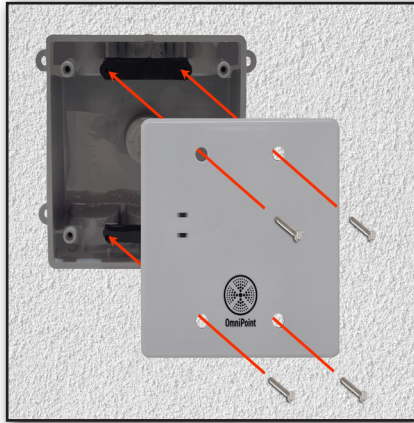


Note: You must weather-proof the cable connections. $\frac{3}{4}$ inch conduit fitting is recommended.

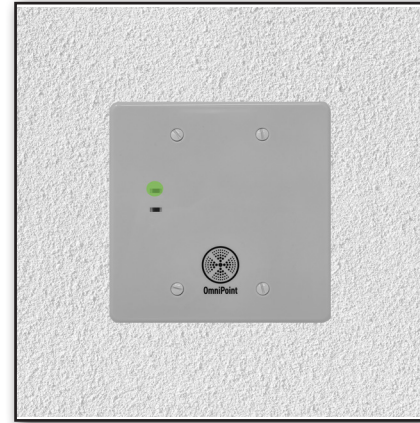
Indoor Installation

EPM with Internal Antenna (Flush Mount)

3. Attach the OmniPoint EPM to the external box with either flathead or security screws, based on your preference.



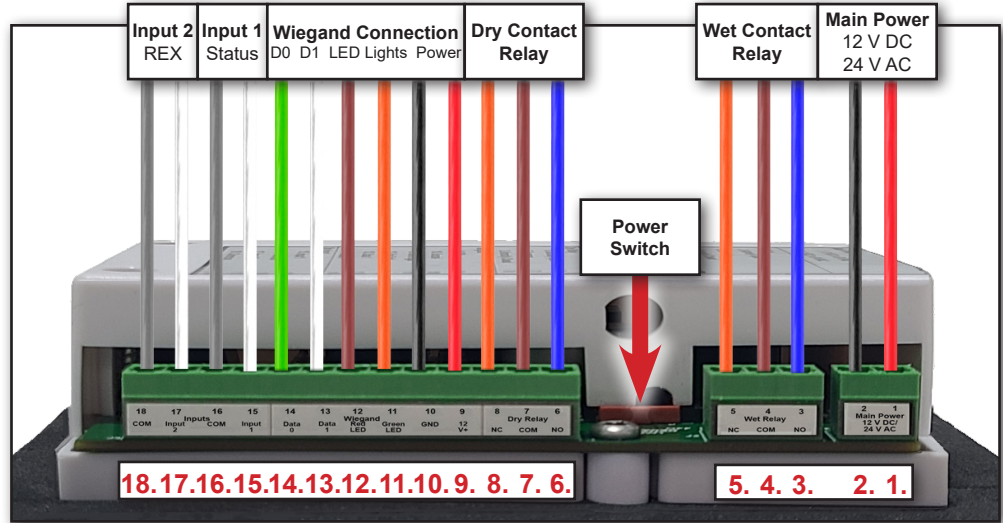
4. Now mount the EPM inside the wall. It will now be powered up and ready to use if all steps were followed correctly.



Note: A flush mount installation only requires a two-gang mounting bracket.

Wiring Diagram

- Main Power:
 1. 12 V DC or 24 V AC +
 2. 12 V DC or 24 V AC -
- Wet Relay:
 3. NC: Normally Closed
 4. COM: Common
 5. NO: Normally Open
- Dry Relay:
 6. NC: Normally Closed
 7. COM: Common
 8. NO: Normally Open
- Wiegand Inputs:
 9. Wiegand Power 12 V DC +
 10. Wiegand Power 12 V DC -
 11. Green LED
 12. Red LED
 13. D1 (Data)
 14. D0 (Data)
- Input 1
 15. Gate or door status input
 16. Input Common
- REX (Request to Exit)
 17. REX (Request to Exit)
 18. REX Common



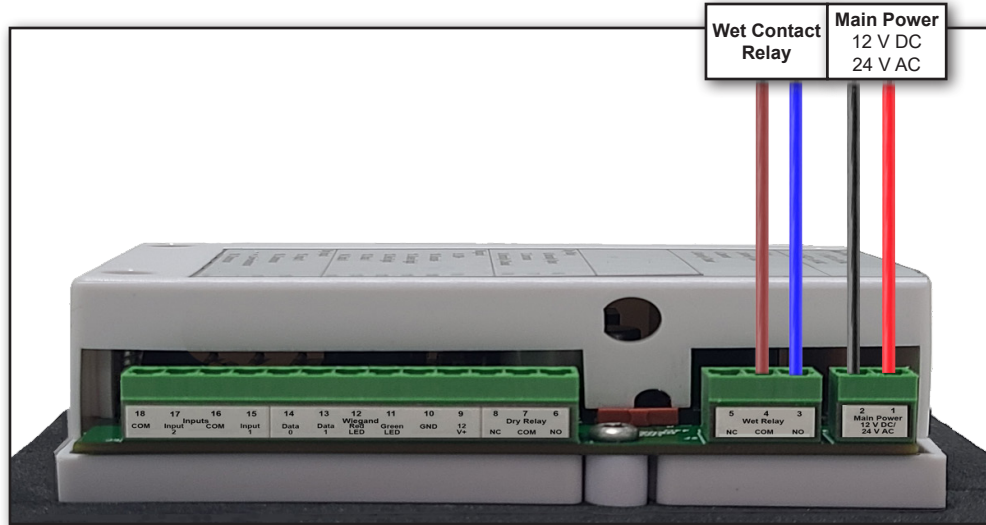
Wiring Standards

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

Wet Contact Relay, Normally Open

Requires 12 V DC or 24 V AC Trigger Power

Voltage is provided when the relay activates. Outgoing power is determined by main power (12V DC or 24V AC).

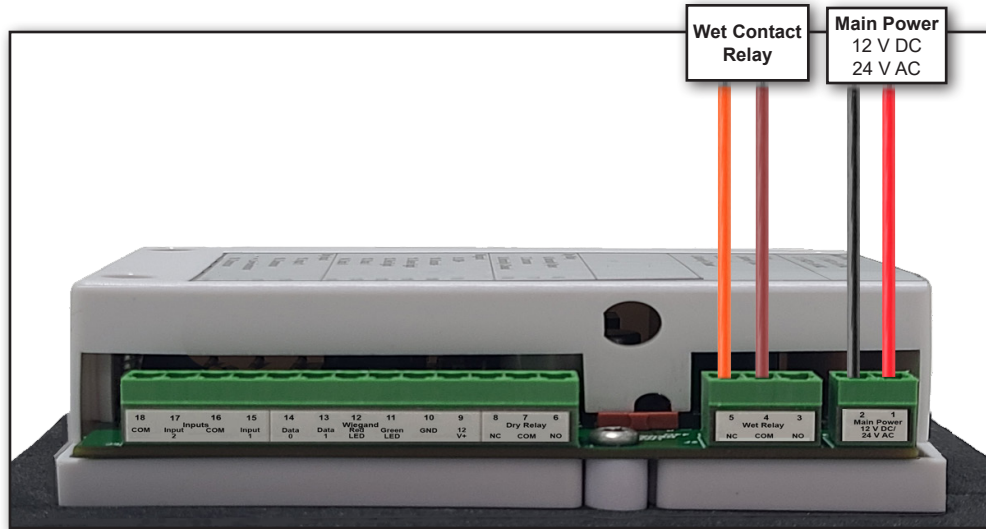


Note: When active, *sends* voltage that is supplied.

Wet Contact Relay, Normally Closed

Requires Constant 12 V DC or 24 V AC

Voltage is removed when the relay activates. Outgoing power is determined by main power (12V DC or 24V AC).

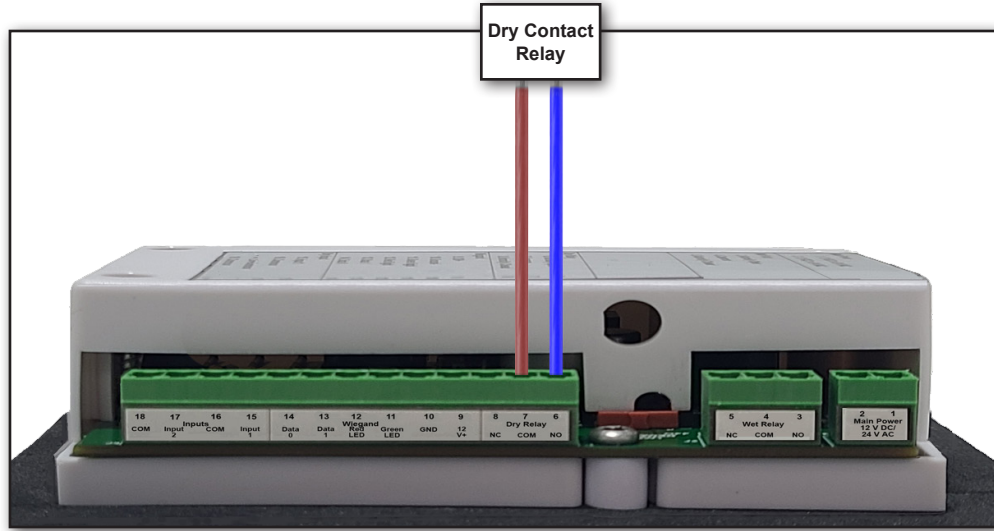



Note: When active, *removes* voltage that is supplied.

Dry Contact Relay, Normally Open

For Doors/Gates not requiring power from the EPM

The gate or door receives continuity when the relay is active.

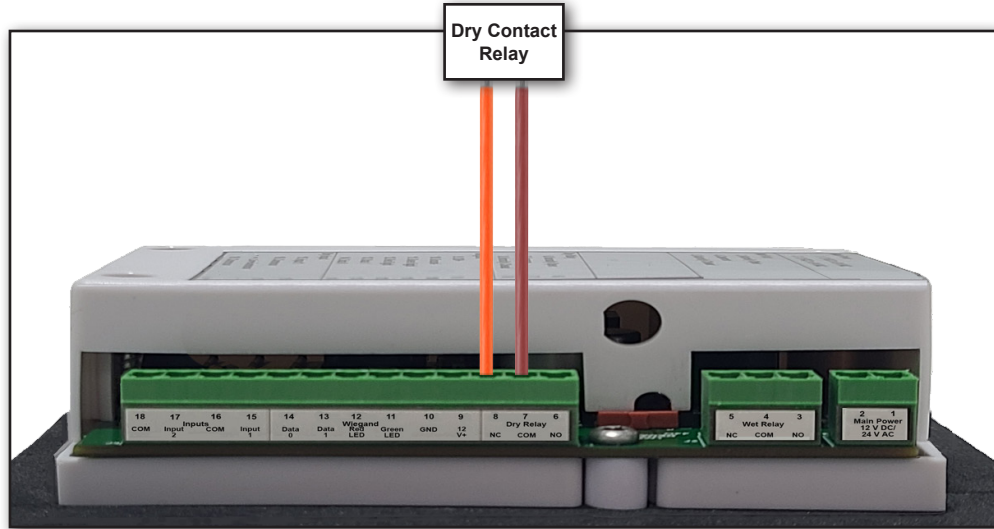


 **Note:** When active, *sends* continuity.

Dry Contact Relay, Normally Closed

For Doors/Gates not requiring power from the EPM

The gate or door receives continuity when the relay is at rest.

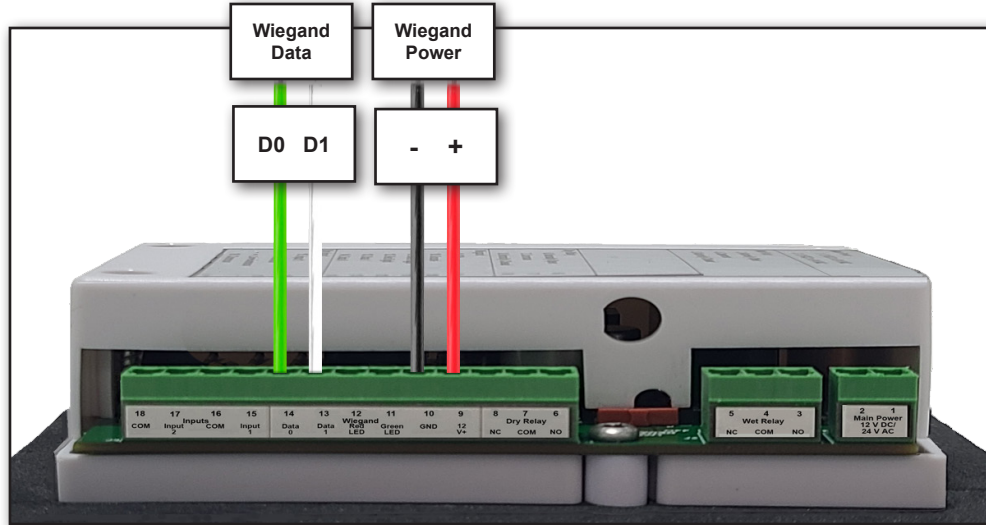


Note: When active, *removes* continuity.

Wiegand Wiring

Provides power and data input for 26-bit Wiegand devices

See below for an example of Wiegand wiring.

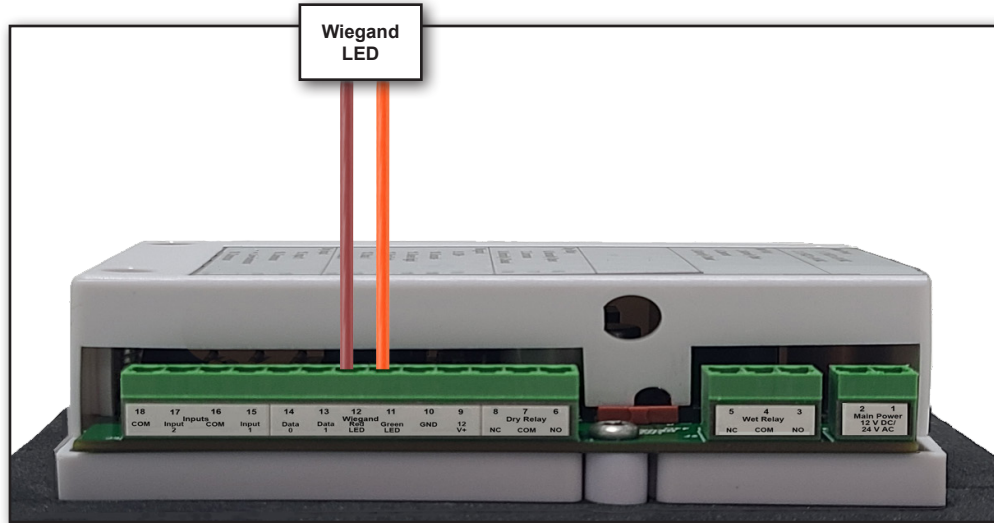


Note: The Wiegand power output only provides **12 V DC**.

LED Input Wiring

For Wiegand devices with LEDs

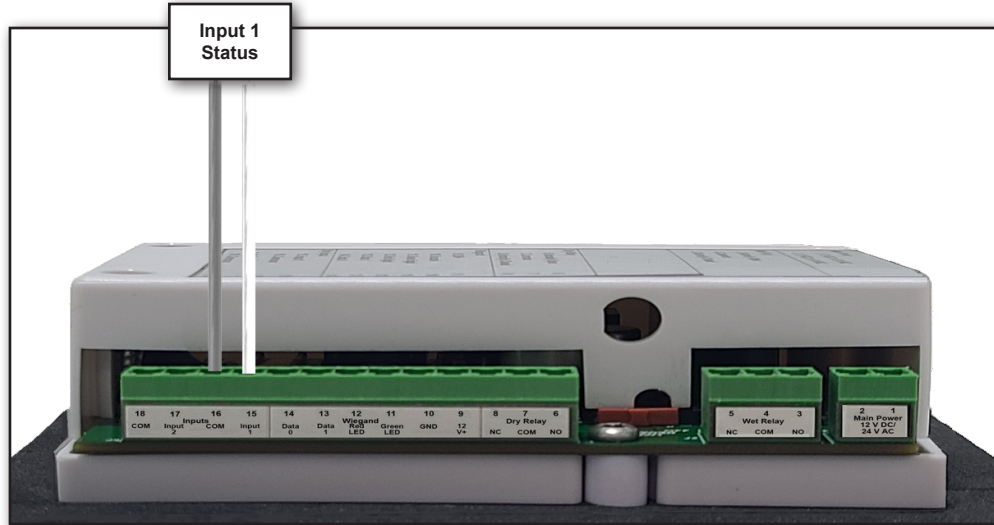
See below for an example of LED input wiring if you are using LED for the Wiegand keypad.



Input Status 1

To monitor the status of a Door/Gate

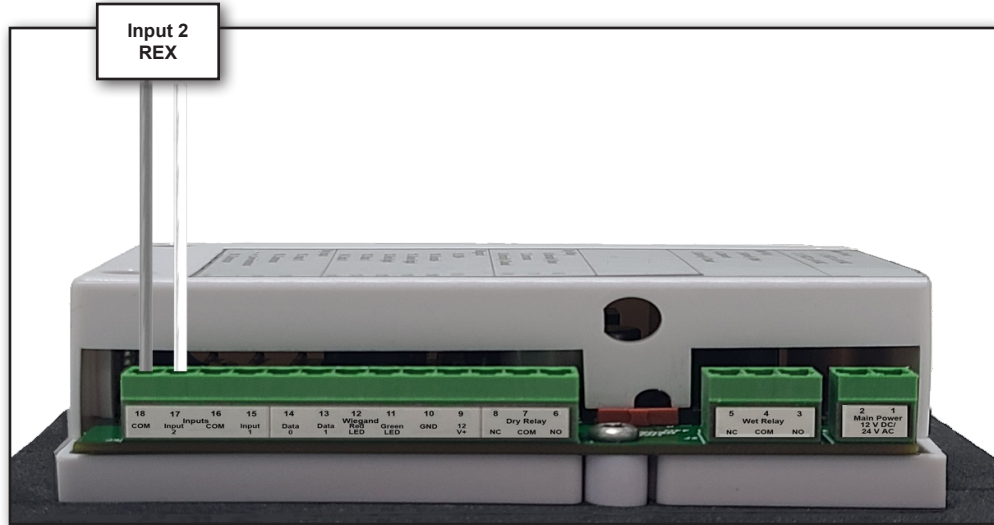
Status sensor that tells system whether gate/door is open or closed using continuity.



Input Status 2 (REX)

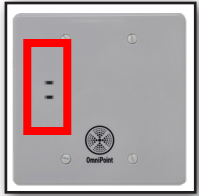
Used as a Request to Exit

A Request to Exit device opens the gate/door when continuity is present.

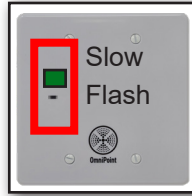


LED Signals

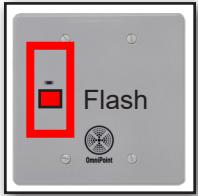
The LED lights on the OmniPoint device signal whether and how the device has connected with the server and the Gateway. The green and red LED lights may flash quickly, slowly, or hold steady. See below for a breakdown of the LED lights and what they mean.



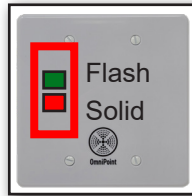
No lights indicate that power is not on; the system is booting up. Please allow 60 seconds for the system to boot up.



A slow green flash indicates the device has a connection with the server.



A red flash indicates that the device has **no** connection to the gateway.



A flashing green light and solid red light indicate you have an active connection and the relay is active.




A quick green flash indicates the device has **no** connection with the server.


About Overmodulation

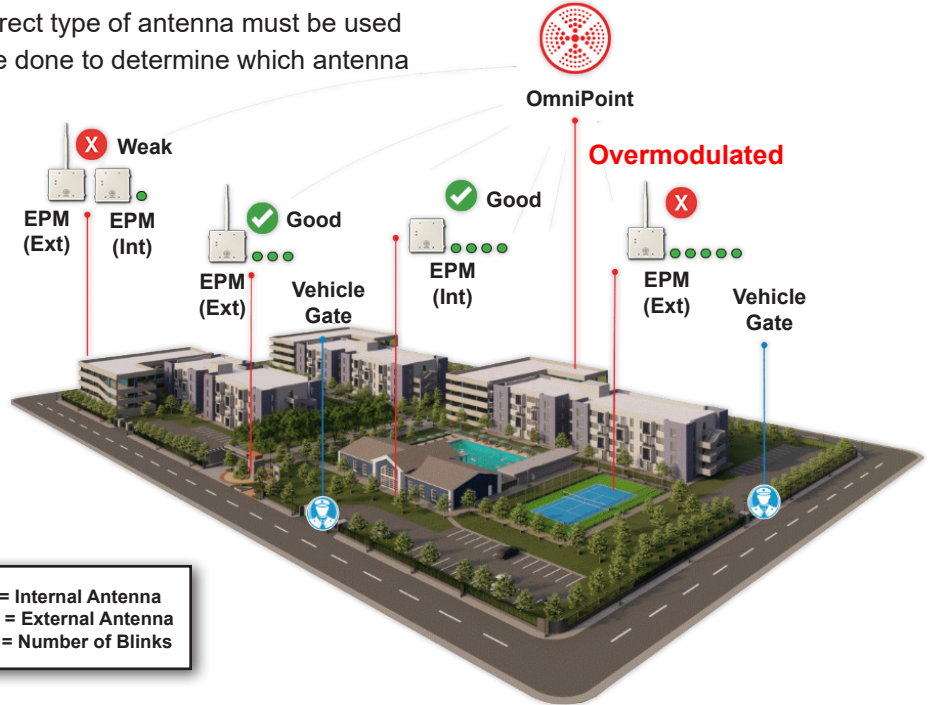
Too Strong of a signal on an EPM can lead to overmodulation.

What happens when the signal is Overmodulated?

Overmodulation causes the signal between the EPM and Gateway to distort, which leads to **data loss**. To prevent this data loss, the correct type of antenna must be used on each EPM. There are a series of tests that can be done to determine which antenna should be used.

 If you are unable to obtain a consistent and stable signal of at least two blinks **DO NOT** proceed with the installation. Contact Dealer Support for further troubleshooting.

Int = Internal Antenna
Ext = External Antenna
 = Number of Blinks



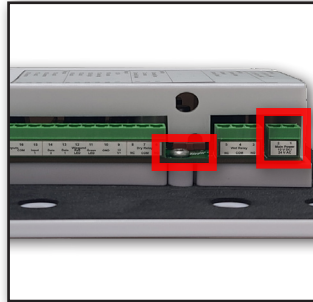
Signal Strength Guide

Follow the instructions below to enter into test mode.

Entering Test Mode:

1. Power up your EPM
(use switch or plug in power)
2. Wait until both red and green LEDs light up at the same time
3. Using a thin tool such as a paperclip or small screwdriver, push in and hold the reset button. When both lights go off, release the reset button.
4. Now the green LED will periodically blink. The number of blinks in between pauses will determine the signal strength.
5. To exit test mode, power cycle the device (repeat step 1).

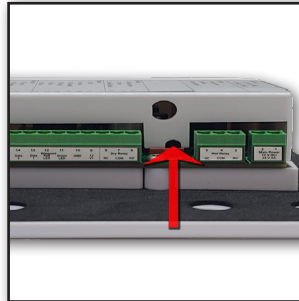
1.



2.



3.



4.



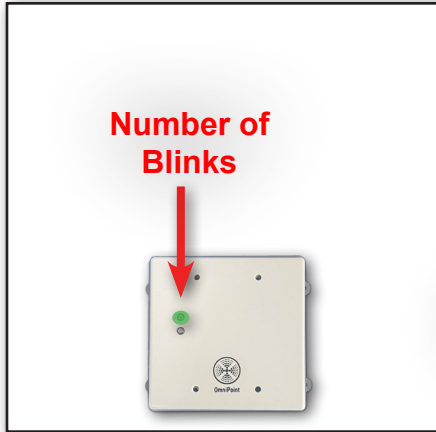
Determining the Type of Antenna Needed

Now we will determine if the EPM needs an external antenna.











When testing, the green blinks/signal must be *consistent* and *stable*. If at any point you notice a **red** blink, you do not have a *consistent* signal. In this case, do not proceed with installation.

LED Color	Status
	No Signal 

Test with the Internal Antenna



Possible Overmodulation

Number of Blinks	Recommendation
	Try External 
	Internal 
	Internal 
	Internal 
	Internal 

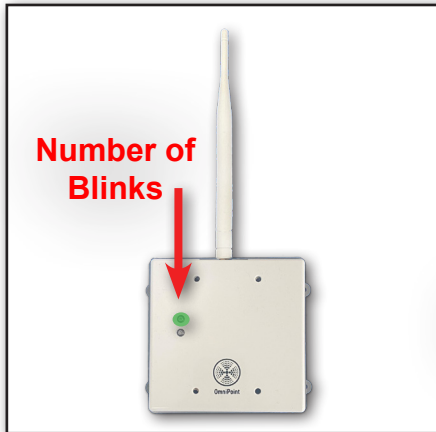
Determining the Type of Antenna Needed

Now we will determine if the EPM needs an external antenna.








If you are unable to obtain a consistent and stable signal of at least two blinks **DO NOT** proceed with the installation. Contact Dealer Support for further troubleshooting.

Test with the External Antenna

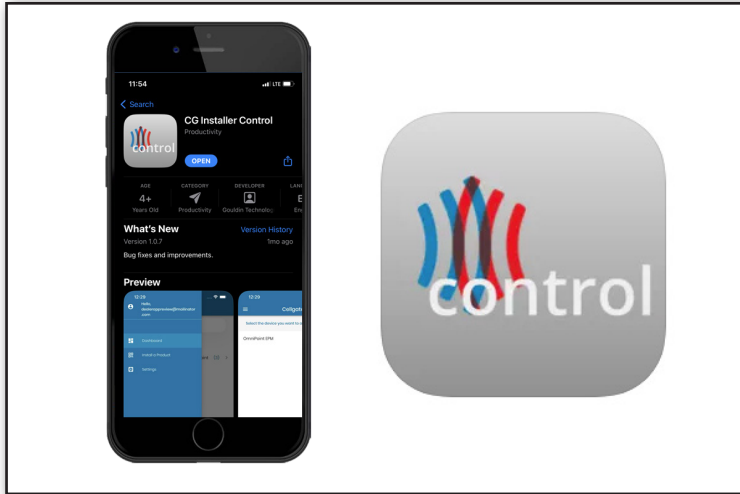


Possible Overmodulation

Number of Blinks	Recommendation
●	Do Not Install 
● ●	External 
● ● ●	External 
● ● ● ●	External 
● ● ● ● ●	Try Internal 

Downloading the CG Installer Control App

If you have not yet, download the “CG Installer Control” app to your smartphone. Search for “CG control” in the iOS App Store or Google Play Store, and download the app.



For iPhones, scan this QR code to download the Control app from the App Store.



For Androids, scan this QR code to download the Control app from the Google Play Store.

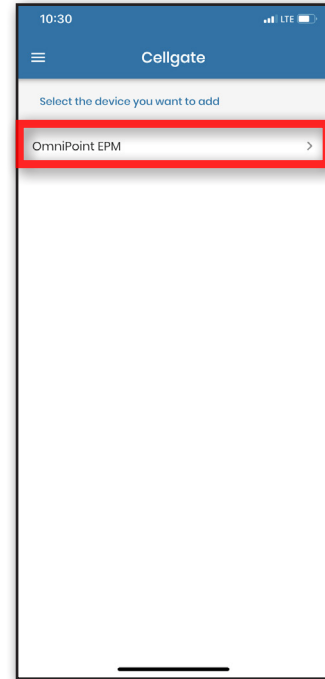
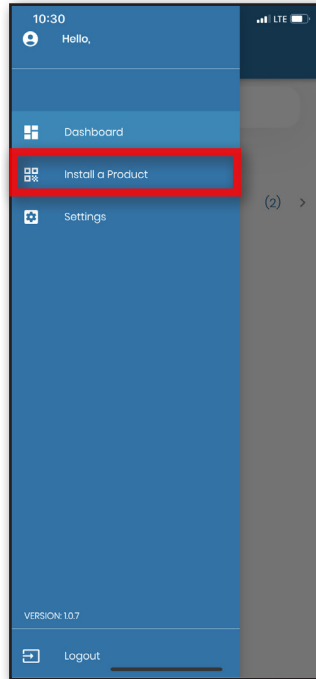
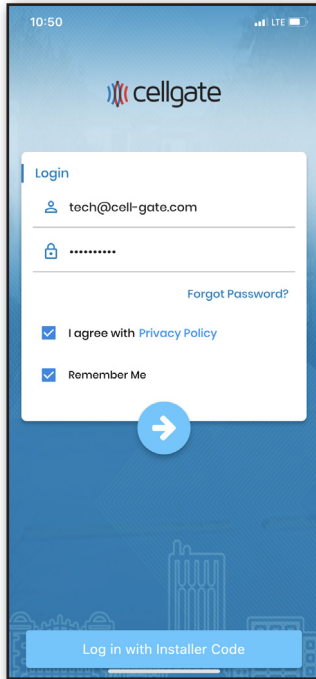


Registering the EPM

Open the CG Installer Control app and login. If you do not have a dealer log in, contact CellGate Customer Support at 1-855-694-2837.

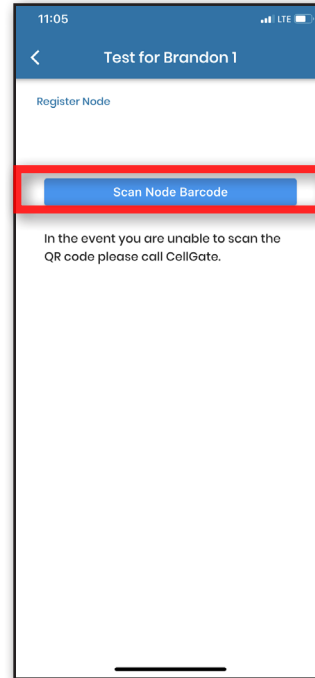
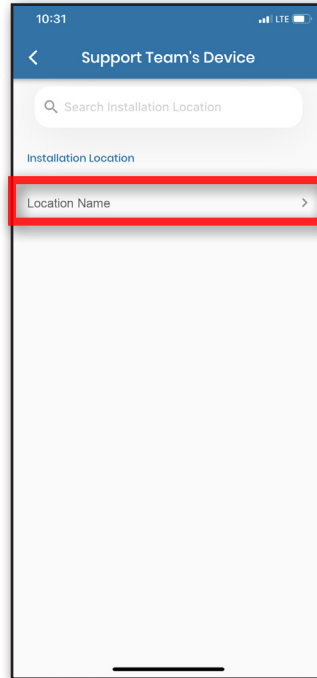
-Tap **Install a Product**.

-Tap **OmniPoint EPM**.



Scanning the QR Code

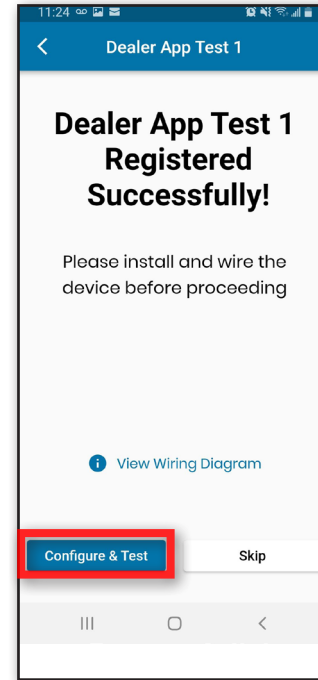
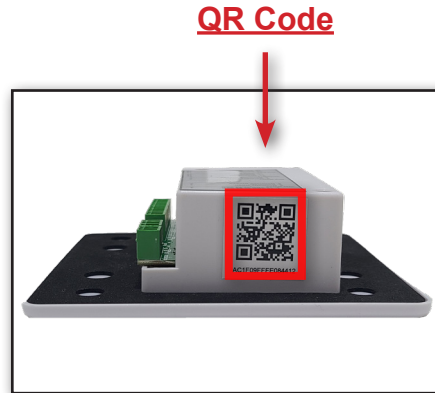
- Tap **Location Name** (this is an example - it will be the name of the actual property).
- Select the property location.
- Tap **Scan Node Barcode**.



Scanning the QR Code

Scan the QR code on the side of the EPM. A message will pop up showing the registration was successful.

Next click **Configure & Test**.



Checking the LED

Verify the green light is blinking slowly, at the rate of once a second approximately. If it is, click **“Yes”** - if not click **“No”** - Clicking **“No”** will take you to a troubleshooting step. Otherwise, we can click **“Yes”** and proceed to the next step.



Setting Trigger Times

Select “Set Trigger Times”

- Set the “Relay” time in seconds
- Set the “Wiegand” time in seconds
- Set the “Request to Exit” time in seconds

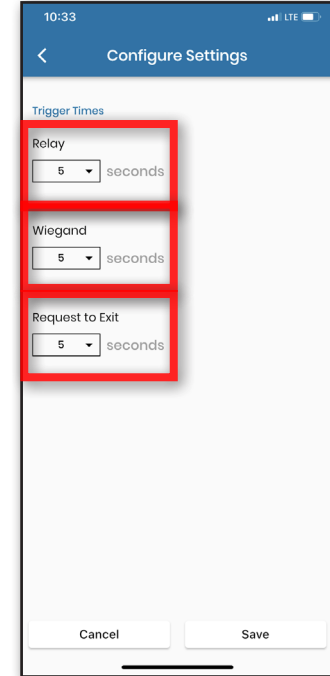
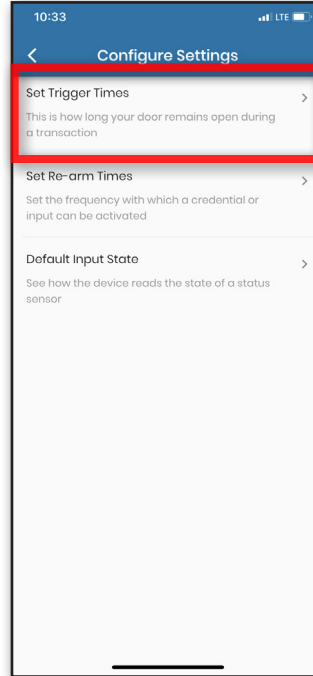


Note:

Relay time: The amount of time relay stays open when activated.

Wiegand: How long relay remains active from Wiegand transaction.

Request to exit: How long relay remains open after request to exit.



Setting Re-Arm Times

Select “Set Re-Arm Times”

- Set the “Re-Arm Wiegand” time in seconds
- Set the “Input 1” time in seconds
- Set the “Input 2” time in seconds
- Tap **Save**

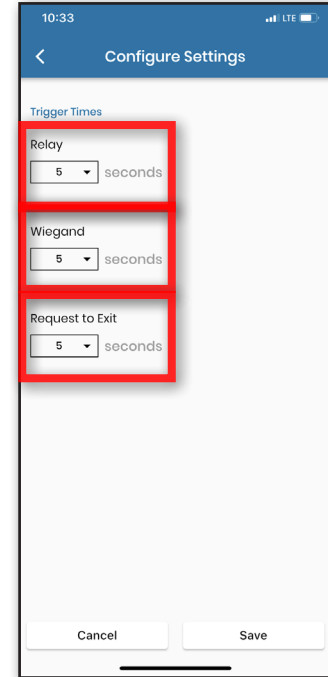
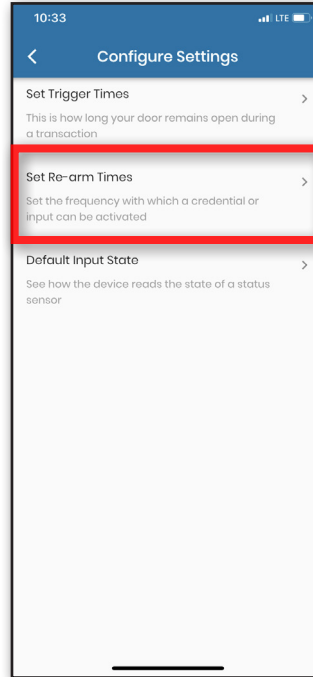


Note:

Re-arm Wiegand: How many times the same code can be used within the set number of seconds.

Input 1: How often the input switches states; how often input 1 changes are logged.

Input 2: How often the input switches states; how often input 2 changes are logged.

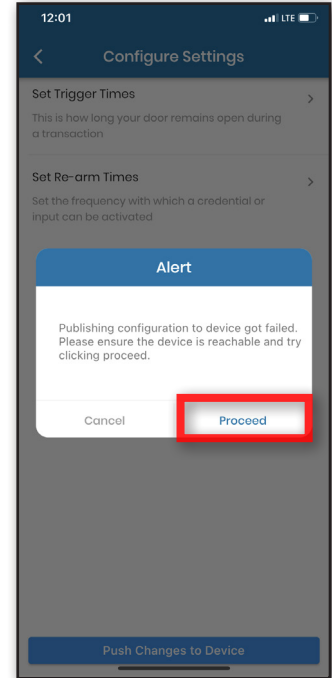
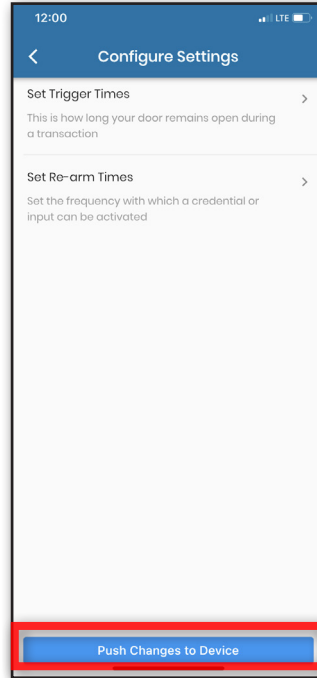
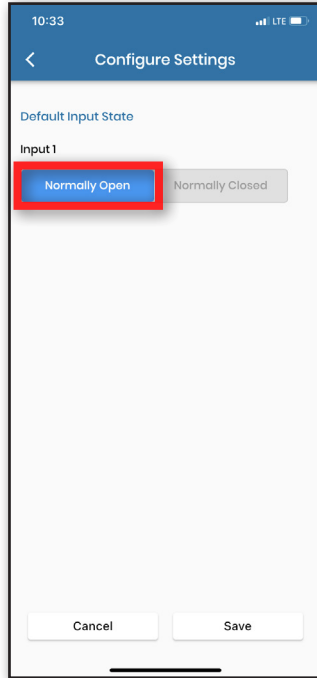


Pushing Settings to the Device

Select Normally Open or Normally Closed for the Default Input State.

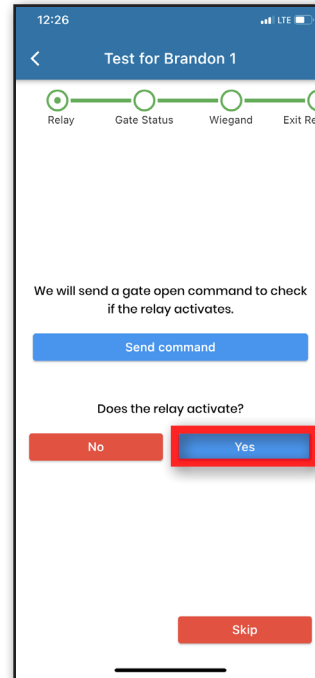
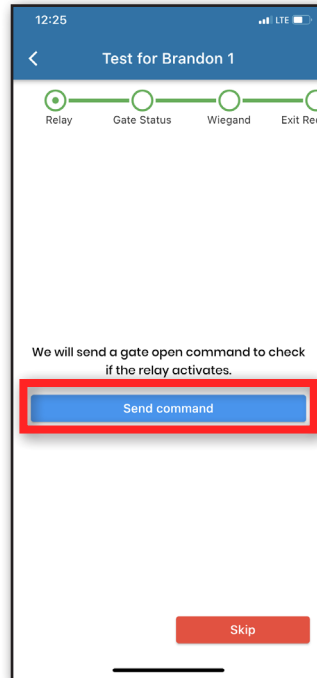
-Tap “Push Changes to Device”

Note: If you get the push error, power cycle your EPM and wait for the green heartbeat again, then click Proceed.



Testing the EPM

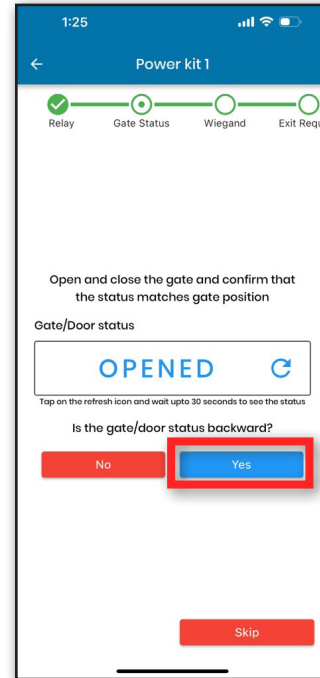
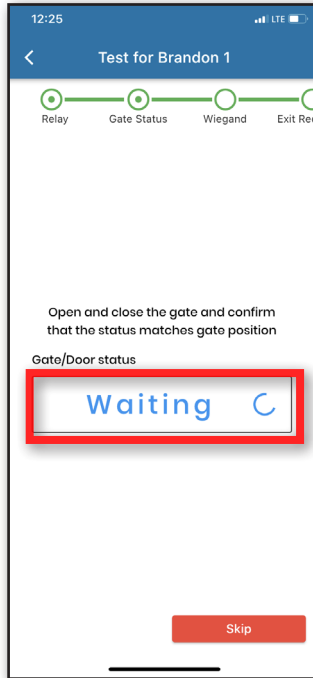
Activate the relay by tapping “Send Command”. This should trigger the gate/door. If it was successful then tap “Yes” - if not tap “No”.



Verify Door/Gate Status

Verify the Gate Status. If OmniPoint is working correctly, **Gate Status** displays as either **Opened** or **Closed**. A **Gate Status** of **Unknown** indicates the system is not receiving data from the door status sensor. If you don't use gate status, click **Skip**. Tap **Yes** to move to Wiegand testing.

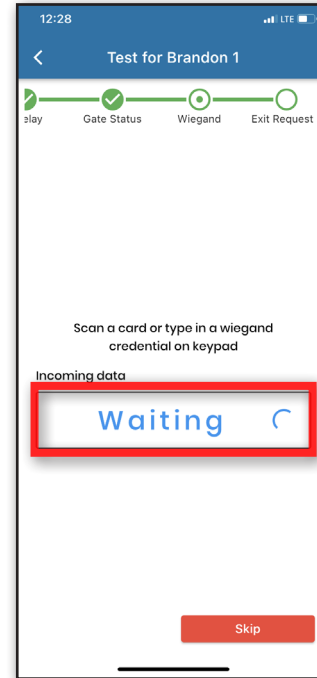
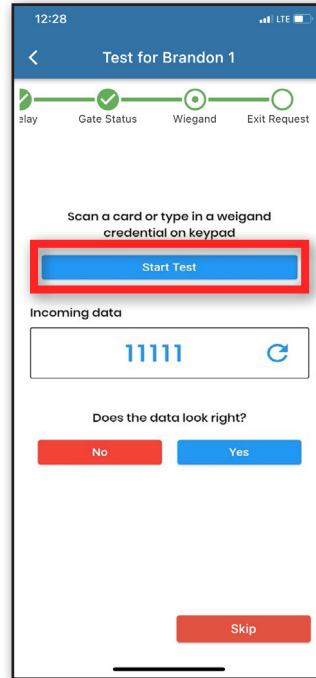
Note: Open and close the door to ensure the status is correct.



Testing the Wiegand Function

Now it's time to verify that the OmniPoint device reads Wiegand codes correctly. Tap “**Start Test**”. To test, scan a RFID card or enter a Wiegand code. Verify that the Wiegand information you entered displays. An incorrect or blank code generally indicates a wiring problem.

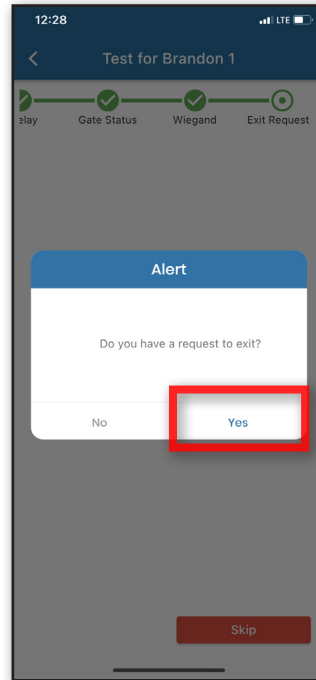
Note: The most common wiring problem is the D0 and D1 wires being reversed. If you are getting inconsistent or incorrect codes, try swapping the D0 and D1 wiring.



Request to Exit

The app prompts you to send a Request to Exit to verify the process is working correctly. A pop-up asks if you have a request to exit. Tap “Yes”.

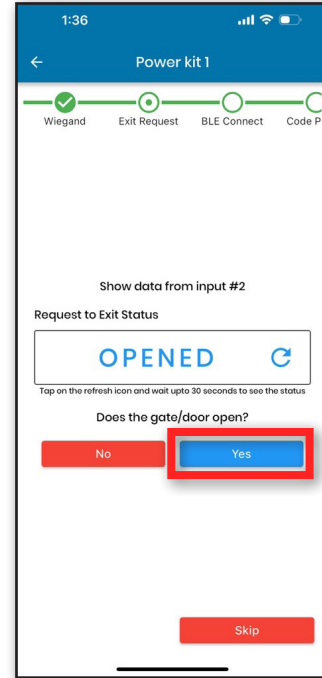
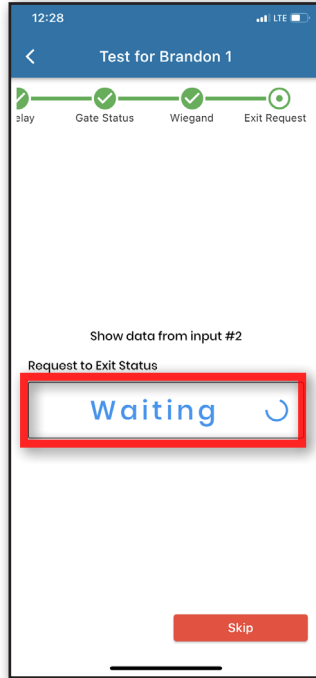
Note: Request-to-exit (REX) devices are used in conjunction with access control systems to ensure that tenants are able to freely and safely exit an area.



Verify Door/Gate Status (REX)

Verify the Gate Status. Tap “Yes” if the command worked. The Gate Status should display Open or Closed. If the Gate Status is Unknown, the request to exit did not work and the system is not receiving data from the OmniPoint device.

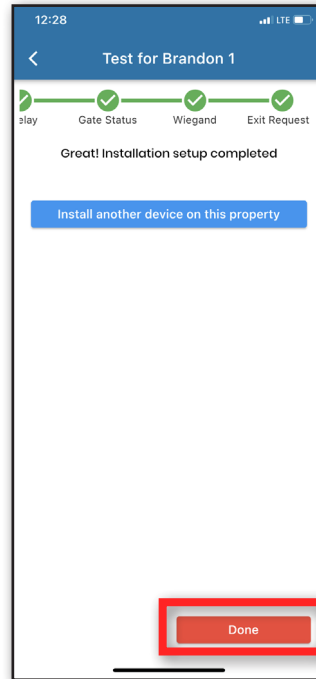
Note: Open and close the door to ensure the status is correct.



Installing the Next EPM

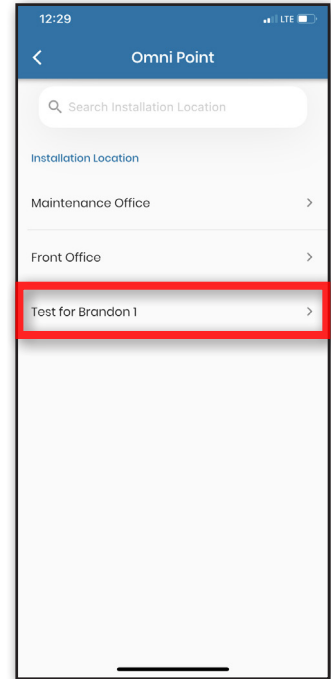
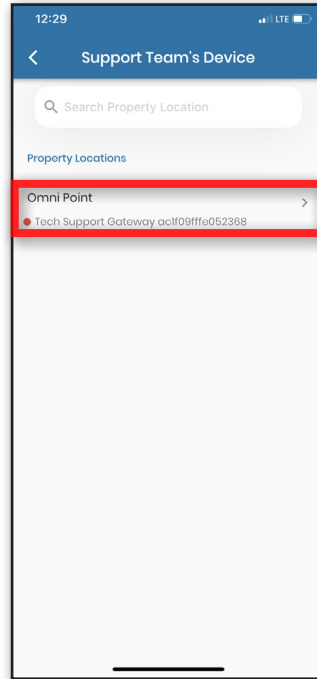
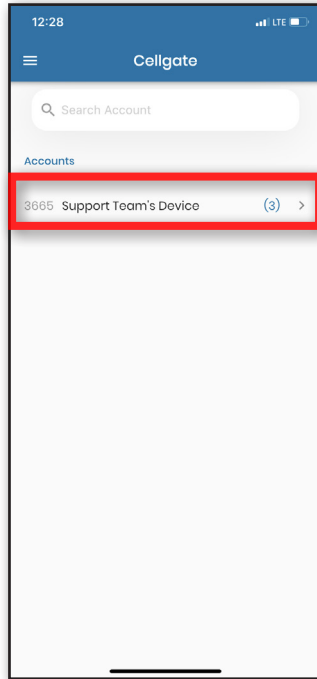
If installation is successful, a message displays stating, “Great! Installation setup completed.” If you want to install another device, tap Install another device on this property.

Note: If you tap Done, you are returned to Account Selection on the dashboard



Checking the Function Screen

Now click through your Account, Property, and then Location.



Note: Your steps may vary depending on your Properties.

Testing Your Relay

Now you are on the main function screen for the EPM. Here you can do various tests, and also go back and change the settings that were configured previously.

