Chapter 1. Door Operator Integration

Table of Contents

PROTECTOR.Net door controllers are capable of integrating with door operators (also called handicap operators, auto openers, automatic door opener) and features flexible sequencing options.

Benefits of the integration include the following:

• Reduce or eliminate the need for third-party sequencing devices.

• Eliminate the need for timer relays or relay logic for disabling the operator when the door should be locked.

• Software configurable timers and sequencing options instead of potentiometers or physical buttons.

• Only 1-3 pairs of wires between the access control panel and door operator for integration.

Requirements

• For maximum flexibility, a POE-ODM-XB or POE-ODM-MB is recommended in order to accommodate more inputs and outputs.

• At least 1 Output reserved on door controller to connect to door operator.

• At least 2 Inputs reserved on door controller for connection to door operator buttons (inside and outside button).
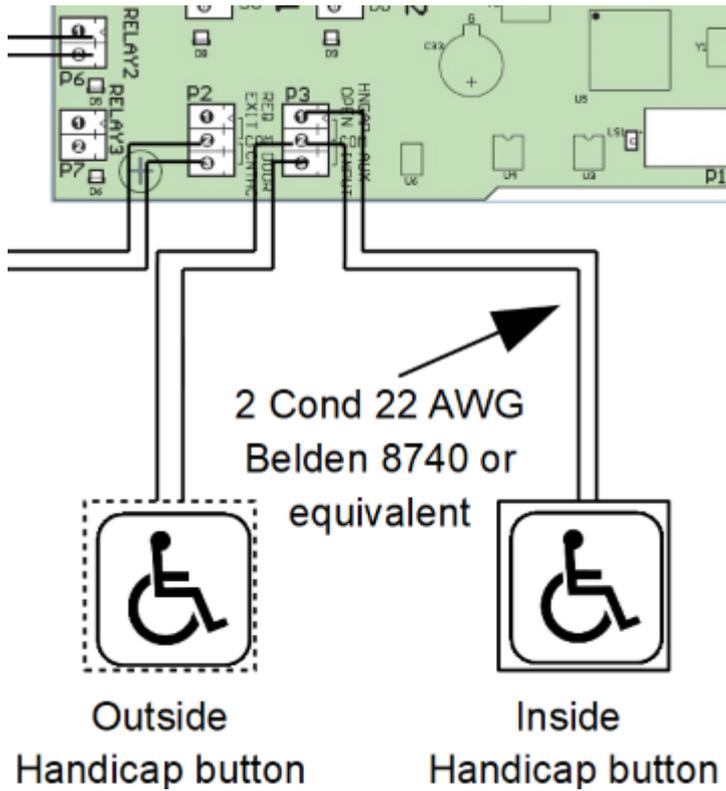
Wiring

This section will outline wiring of an auto operator and includes diagram examples.

Inputs

Ideally the outside and inside operator buttons should be wired to inputs on the door controller. 2 conductor 22 AWG should be utilized. If wireless buttons are utilized, the connection to the door controller will be from the wireless receiver, which should have a relay available. Reference the following diagram:

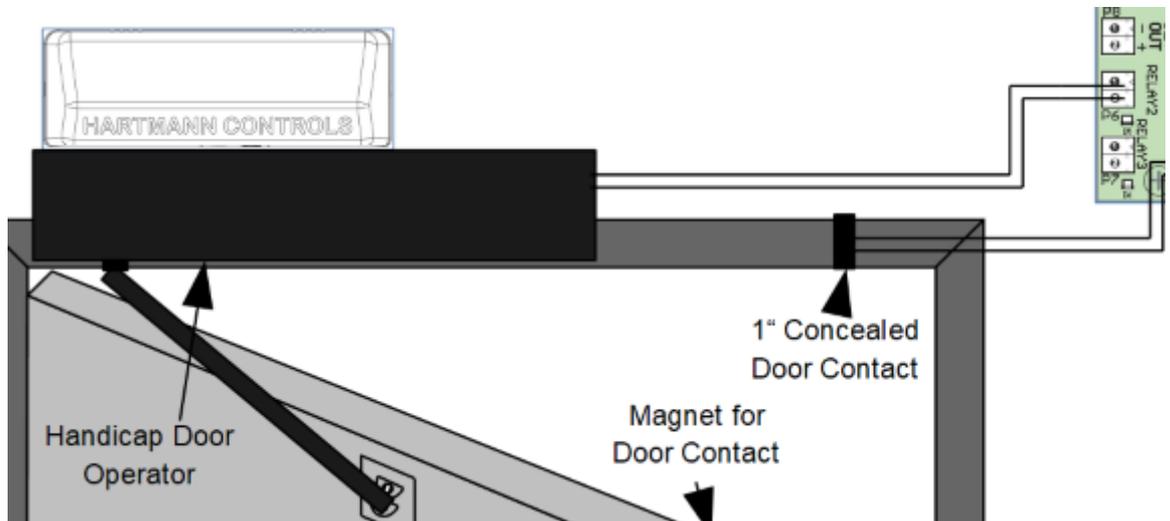**Figure 1.1. Input Diagram: Door Opener Buttons**

Any inputs can be used (software assignable) but is more convenient to use the inputs on the headerblock labeled P3. Middle pin is ground. Top and bottom are signal for input 2 and input 3. Buttons should be dry contact, normally open, momentary closure.

Outputs

Most door operators will accept a dry contact signal to tell the door operator to open the door. Opening speed and hold time are often configured directly on the door operator.

A single pair of 22 AWG wire should be all you need to connect to the door operator. Output 2 (relay 2) on a POE-ODM-M or POE-ODM-X is the default output for connecting to auto operators. Output 3 (relay 3) can also be used. Reference the following diagram:

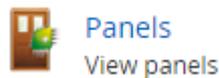**Figure 1.2. Output Diagram: Door Opener Output**

📋 **Note**

If the auto operator opens right away when connected to one of our solid state relays (output 2 or 3) without our relay closed, place an inline 1K resistor or use an external mechanical relay that is triggered from the solid state relay.

Software Configuration

This section will cover software configuration available for sequencing, input/output configuration and other settings related to auto operator integration.

Input/Output Configuration

1. Take note of which inputs and outputs are being used on the door controller.

2. Log in using the Administrator account you created during the initial setup or provided to you by your dealer/installer.

3. On the **Home Screen**, scroll down to the section titled **Hardware**; click on the **Panels** icon (pictured below).
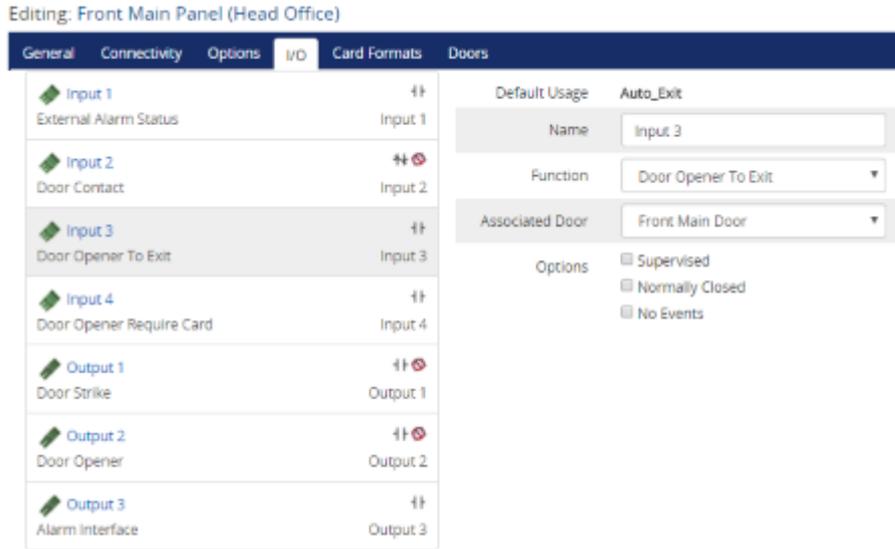

Panels
View panels

4. On the **Panels screen**, you'll see any Panels you've already added to the software. Click the **blue** button (Advanced Settings) next to the Panel you've connected the auto operator to.

5. On the **Edit Panel** screen, there are four tabs. Click the IO tab.

6. On the I/O tab, the left hand column shows each Input and Output along with the current function beneath it. The currently selected Output/Input (shaded in gray) will have its information shown on the right side.

7. Output 2 should already be configured as a Door Opener output. If not, select Output 2 on the left hand side and use the Function drop-down menu on the right side and select Door Opener.

8. If you are connecting the auto opener buttons into the door controller:

   a. Configure the inside button function drop-down menu as Door Opener To Exit.

   b. Configure the outside button function drop-down menu as Door Opener Require Card.

   ℹ️ **Tip**

   The button assigned as Door Opener Require Card will only activate the door operator if the door was already unlocked or a valid credential has been granted access via a reader. If the door is locked, the button will do nothing except report an event to the software.

9. Your I/O configuration should look similar to the following diagram:

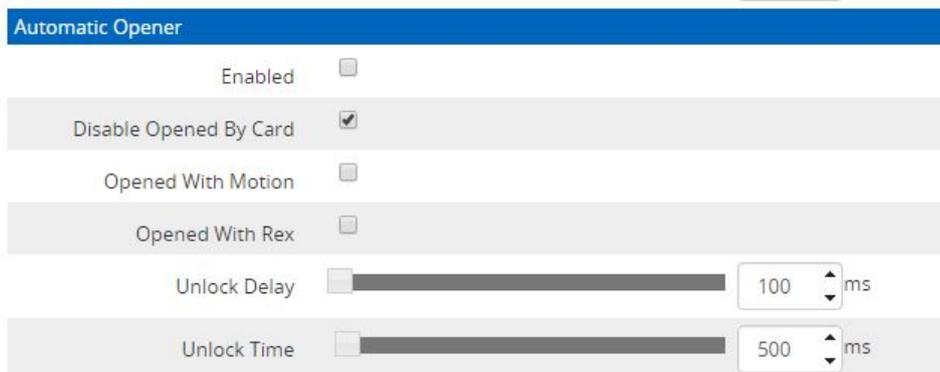Click Save on the bottom of the page if you made any changes.

Door Timers and Sequencing

After I/O configuration, timers and auto opener settings should be configured.

1. On the **Home Screen**, scroll down to the section titled **Hardware**, click on the **Doors** icon (pictured below).

2. On the **Doors** screen, you'll notice any Doors you've already configured listed here. Click the blue button next to the Door connected to the auto operator.

3. On the **Edit Door** screen, you'll see 5 tabs each with their own configuration items. Click on the **Options** tab.

4. Scroll down the page and you'll see the section titled Automatic Opener. Details of these options are outlined in the following table:

Table 1.1. Automatic Opener

Checkbox/Timer Name	Description
Enabled	Check if an automatic Door opener is attached to this Door. Must be configured in Panel Input/Output configuration.

Checkbox/Timer Name	Description
Disable Opened By Card	If checked, prevents card presentation from triggering the auto opener.
Opened With Motion	If checked, will allow motion to trigger the auto opener.
Opened With REX	If checked, will allow REX to trigger the auto opener.
Unlock Delay	Automatic Opener Unlock Delay. Increments by 100 ms. Valid values are 100 ms to 1000 ms.
Unlock Time	Automatic Opener Unlock Time. Increments by 100 ms. Valid values are 100 ms to 20000 ms.

5. If you've made any changes, scroll down and click Save. Update your controllers before testing.

User/Cardholder Auto Operator Settings

Cardholders can be configured to automatically activate auto operators when they are granted access to a reader. Use the following steps to do so:

1. Ensure that Disable Opened By Card is disabled on Options tab of the Edit Door screen (as outlined above).

2. Navigate to the Add or Edit screen of a User (cardholder).

3. Check the Auto Opener user attribute in the General tab/section.

4. Update your controllers.