

## 7155-0007 Installation Instructions

The Transport Vehicle Present sensor mounts on the building exterior, above a loading dock. The sensor mounts to a long bracket, designed to span most awnings, shelters and dock seals, for unobstructed transport vehicle detection.

Review the installation instructions included with this kit to determine an appropriate mounting location for the mounting bracket.

### NOTICE

Ensure the chosen bracket location will not interfere with an awning/ shelter, or other building materials. Many facilities are built using precast walls, which contain embed plates. Select a location free of obstructions for anchors and field wiring.

### NOTICE

Hardware for mounting the sensor bracket is not included in this kit. Choose appropriate hardware based on the construction material of the building wall.

### Install Mounting Bracket

1. Locate the center line (A) above the door opening. The mounting bracket (B) can be mounted up to 12" off center to avoid obstructions. See **Figure 1**.
2. Mark a location for the mounting bracket based on the centerline, that is 15-20' above the approach. Ensure the area can be drilled for mounting hardware and for the sensor cable. Inspect the inside and outside of the wall, to determine an appropriate path for the cable to reach the iDock (C). (Using a wall scanner to avoid re-bar or embed plates is recommended.)
3. With the slot (E) facing down, position the mounting base against the building wall in the location chosen in steps 1-2. Ensure it is plumb and level. Then mark the holes for the mounting hardware (G) and the sensor cable (H). See **Figure 2**.

**Note:** If necessary, an alternate hole (J) for the cable may be used. The hole may be 6" below and in-line with the mounting bracket. **Figure 2**.

4. With the holes marked, drill the hole for the sensor cable first (H or J). The bit must be at least 3/8" in diameter and an adequate length to pass through the wall. Choose an appropriate bit for the building wall material.

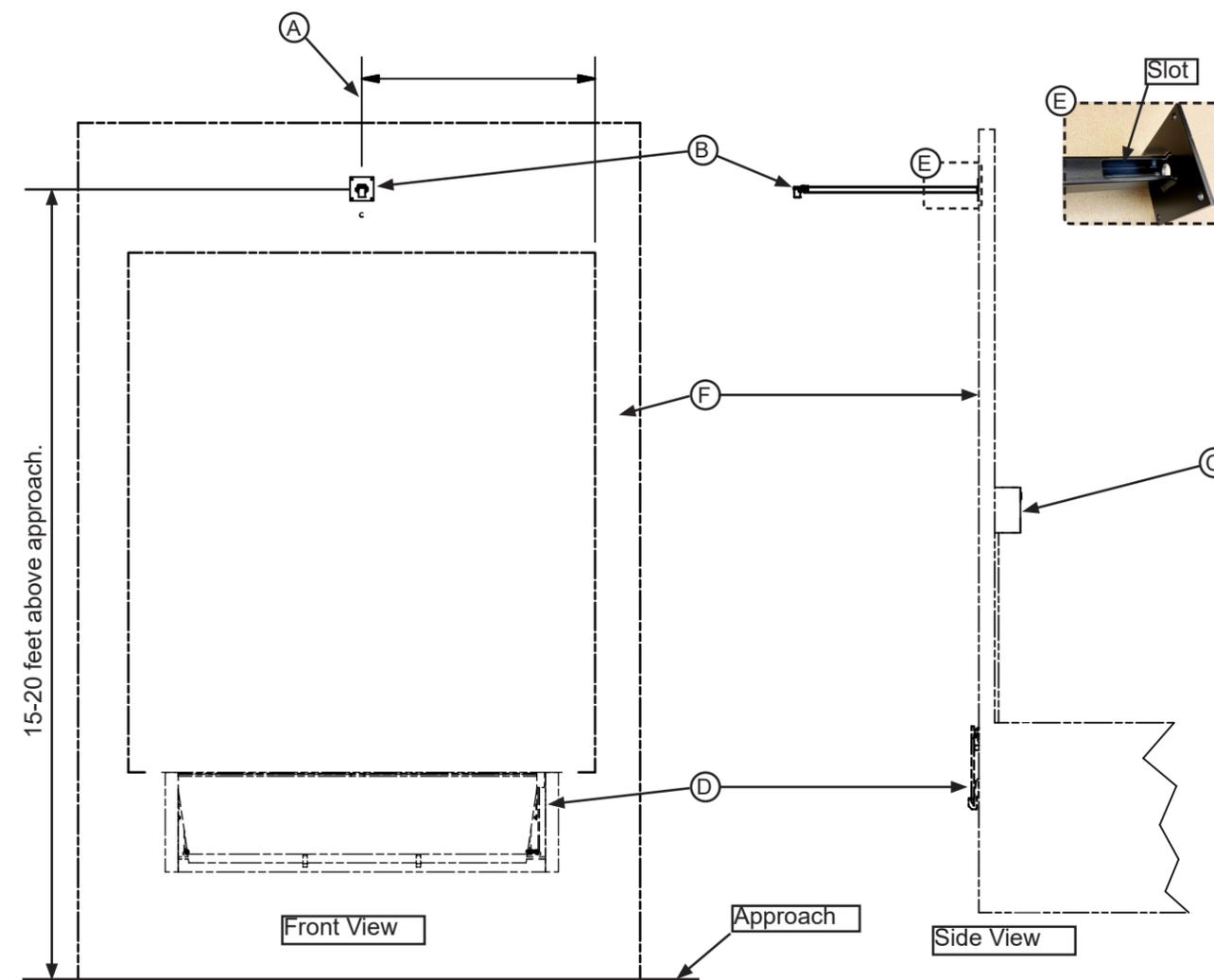
**Note:** Position overhead door in the closed position to avoid damage.

5. Assemble the sensor and housing. Insert the sensor into its housing. See **Figure 6** on page 2.
6. Adjust the white sensitivity dial on the sensor to halfway (pointing away from building.) See **Figure 3**.
7. Then pull the long sensor cable through the mounting bracket (B), through slot (E), and attach the cable to the sensor connector.
8. Attach the sensor housing to the bracket, using the included hardware:
  - Make sure the sensor cable rests in the slot in the housing and is not pinched when attached. See **Figure 3**.
  - Feed cable slack into hole in bracket.
  - Ensure the sensor is pointing down toward the slot in the mounting bracket. Install the housing cap when finished.
9. Choose one of the upper anchor holes that was marked in step 3. Drill the hole for the anchor using the correct bit according to the hardware chosen for this application.
 

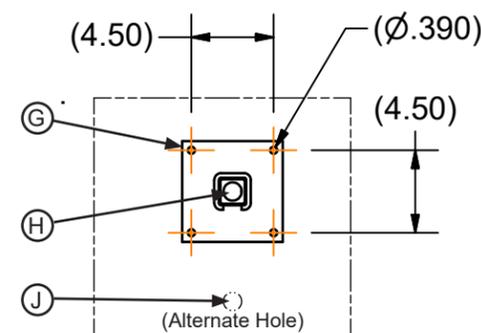
**Note:** 5/16 x 2" sleeve anchors are recommended for masonry applications.

10. Secure the sensor bracket to the first hole using the mounting hardware. Ensure the bracket is level and plumb, then tighten the fastener.
11. With the bracket located using the first anchor and with the bracket plumb and level, drill a hole for one of the lower anchors. Then insert the second anchor.
12. Continue to drill the remaining holes and install remaining mounting hardware.
13. Leave extra cable length inside the mounting bracket to allow access to the sensor connector for future service. Cable tie a loop as shown in **Figure 4**.
14. Feed the long cable through the sensor hole (H or J).

*Instructions continued on page 2.*



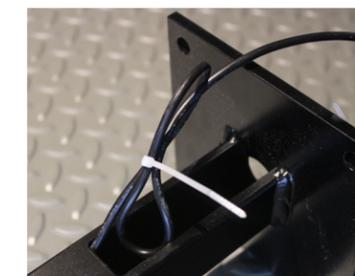
**Figure 1**



**Figure 2**



**Figure 3**



**Figure 4**

A— Centerline  
B— Mounting Bracket  
C— iDock Controller

D— Dock Leveler  
E— Mounting Base Slot  
F— Building Wall

G—Mounting Hardware Holes (4)  
H—Sensor Cable Hole  
J—Alternate Cable Hole

**Vehicle Present Sensor Installation (Continued)**

**Electrical Connections**

**DANGER**  
Make sure that the power source has been locked out and tagged according to OSHA regulations and approved local electrical codes.

**CAUTION**  
All electrical work — including the installation of the disconnect panel, control panel, and final connections to the pit junction box — must be performed by a certified electrician and conform to all local and applicable national codes.

**NOTICE**  
When installing electrical controls in a temperature-controlled environment, the installer must determine an appropriate means to isolate/prevent thermal and vapor transfer through electrical conduit where conduit routing crosses temperature zones. Systems, LLC is not responsible for any damage due to moisture collecting inside the control panel caused by improper isolation/prevention of thermal and vapor transfer through the conduit. Refer to Tech Service Bulletin 19-053 for more information.

1. After the sensor and bracket have been mounted on the building exterior, complete the installation inside the building.
2. Following all local and applicable national codes, and site specific requirements to adequately secure the sensor cable and terminate it in the iDock.

**Note:** Seal the hole between the outside mounting bracket and the inside wall. A junction box is recommended to conceal the hole where the cable enters the interior wall. See **Figure 5**.

**Note:** If door sensors are, or will be installed, the sensor cable can share the same conduit to the iDock.

3. The connections to the iDock are as follows:
  - Brown, Black and Gray connect to terminal block 20.
  - Blue and White connect to terminal block 21.
  - Green connects to the expansion board, terminal 25.

(Reference **Figure 7**.)

**Testing Operation**

1. If the sensor was installed as a retrofit, and not with the original loading dock equipment installation, make sure the iDock System Configuration and Firmware have been updated.
2. After the wiring connections have been made, safely energize the equipment and test the sensor operation.
  - With the power on and no target detected, the Red LED should be dimly lit. See **Figure 8**.
  - When the sensor detects an object, the Red LED will become more bright. See **Figure 9**. Use this LED to confirm sensor operation
  - Monitoring the expansion board DC input #2 will also confirm the sensor's operation. Input #2 should turn off when a target is not present and illuminate when a target is detected. See **Figure 10**.
3. After the sensor has detected a target, there is a 15 second delay before the iDock will acknowledge a transport vehicle is present. This delay is to avoid sensor oscillation due to foot traffic or other objects passing under the sensor. After 15 seconds, verify the display shows the following:

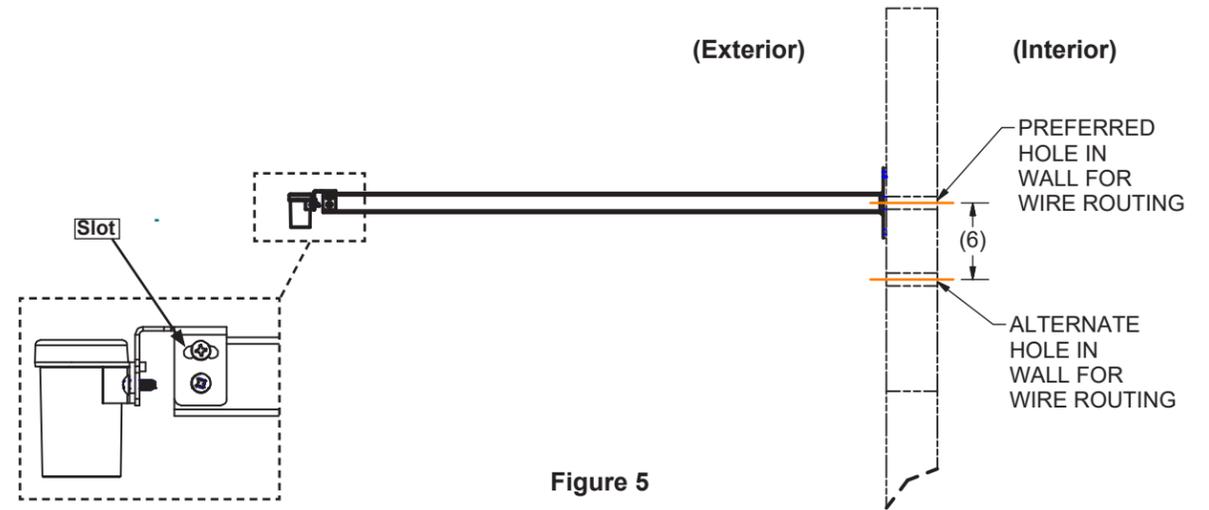
**VEHICLE PRESENT**

*(Alternating Messages)*

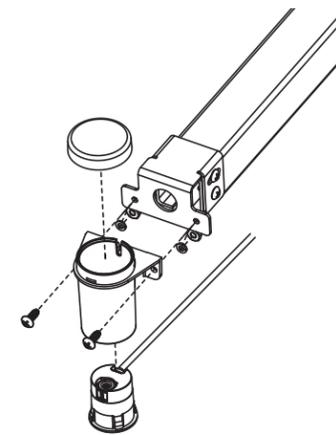
4. If the sensor is mounted near an awning, shelter or dock seal, ensure sensor is not detecting this obstruction. If so, the sensor can be rotated away from the obstruction using the slots in the sensor mount. See **Figure 5**.

**Note:** As an option, the communication light on the iDock can double-flash when a vehicle is present.

5. There is also a 15 second delay before the iDock will turn off the vehicle present notification, when a transport vehicle departs. Verify that the vehicle present notification disappears.
6. If the equipment is operating correctly, based on steps 1-4 above, the installation is complete. If you need assistance with the installation, contact Systems Technical Services.



**Figure 5**

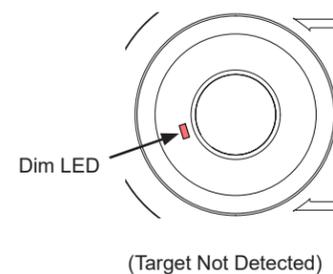


**Figure 6**

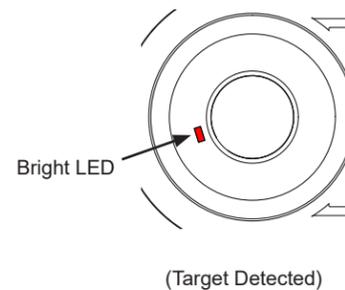
WIRE #	WIRE COLOR	VEHICLE PRESENT SENSOR
20	BRN	BLK
35	GRN	BLU
21	BLU	WHT
	WHT	GRY

- BRN, BLK, & GRY - TERMINAL STRIP 20  
 - BLU & WHT - TERMINAL STRIP 21  
 - GRN - EXPANSION BOARD DC INPUT 2 - TERMINAL 25 (WIRE #35)

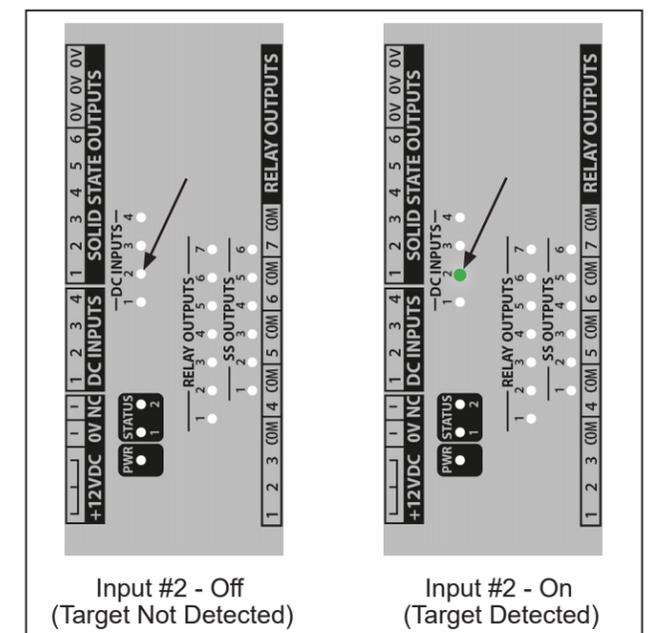
**Figure 7**



**Figure 8**



**Figure 9**



**Figure 10**