
Guardian Mini Pedestrian Signal Installation Manual

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Guardian Mini Installation Manual

906-0030

| Document Revision History | | |
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| Revision | Revised By | Date |
| A | Brad Giesen | 4/25/17 |
| B | Added Figure 2 and reference to Gasket in 3.2.2.8 | 5/2/17 |
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2 Introduction

2.1 Purpose of this document

This guide covers the installation of the Guardian Mini Accessible Pedestrian System (APS). It does not cover the configuration of the Guardian Mini. For details on configuring the Guardian Mini, please see the User's Manual.

2.2 Additional Information

- For operational information, see the Guardian Mini User's Manual
- Reference the Intersection Worksheet for location specific information.
- See the Guardian Mini Installation Quick Guide for a brief graphical installation guide.

2.3 Contact Information

The first line of contact should be the distributor that the system was purchased from. If you are unable to contact the distributor, contact Campbell Company directly.

3 Installation

3.1 Standard Components

- 1ea Guardian Mini APS
 - 2ea 1/4-20 x 1" FHP Screws with Anti-Seize
 - Chase Nipple
- 1ea Signal Power Interface (SPI)
- 1ea USB (type B) cable per installation

3.2 Installation

It is recommended to use an anti-seize compound on all screws going into the pedestrian station. Failure to do so may result in damage to the station if removal is necessary.

3.2.1 Tactile Arrow Orientation

Mount the Guardian Mini so the tactile arrow is pointing directly to the crossing destination. THE PEDESTRIAN RELIES ON THE INFORMATION TO CROSS SAFELY. Some installations do not call out arrow directions and require installation in the field. The tactile arrow is field selectable (left or right) requiring two security screws and a security driver.

3.2.2 Guardian Mini Installation

The Guardian Mini will mount directly to holes drilled for an ADA Button. If holes exist, skip to “Mount the Pedestrian Station” below.

Drill and Tap Pole

1. Mark the point where the PPB will be centered 36” to 42” from the ground.
2. Drill a 1” through hole at PPB center
3. Drill and tap for a 1/4-20 screw 1 ¼” above PPB center.
4. Drill and tap for a 1/4-20 screw 1 ¼” below PPB center.

Mount the Pedestrian Station

1. Route the four conductor cable from the 1” hole through the pole into the pedestrian signal head for connection to the SPI.
2. Unscrew the 2 screws from the front of the Mini to remove the Mounting Plate and Gasket.
3. Screw the Chase Nipple into the hole in the center of the Mounting Plate.
4. Route the four conductor cable and the field terminal wires through the Chase Nipple
5. Attach the Mounting Plate to the pole using two ¼ - 20 x 1” FHP screws.
6. Connect the four wires to the terminal block connections as shown in Figure 1.
7. If there are pedestrian field terminal wires present at the station connect them to the terminal block in the positions shown in Figure 1.
8. Mount the Guardian Mini to the Mounting Plate using the 1/4-20 x 3 ½” screws and gasket removed in step 2 above. See Figure 2.

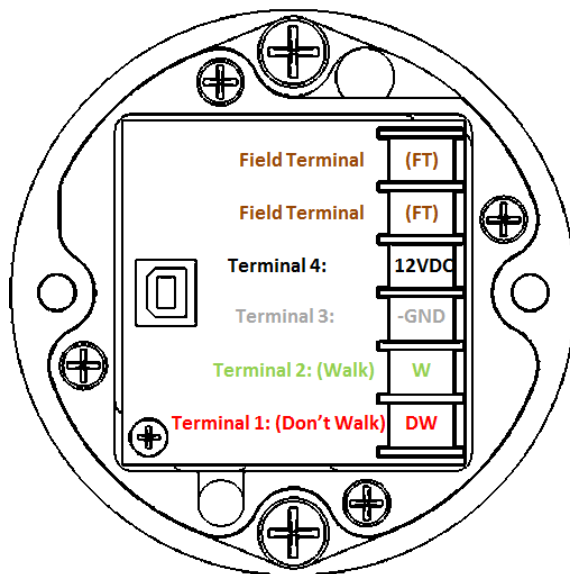


Figure 1

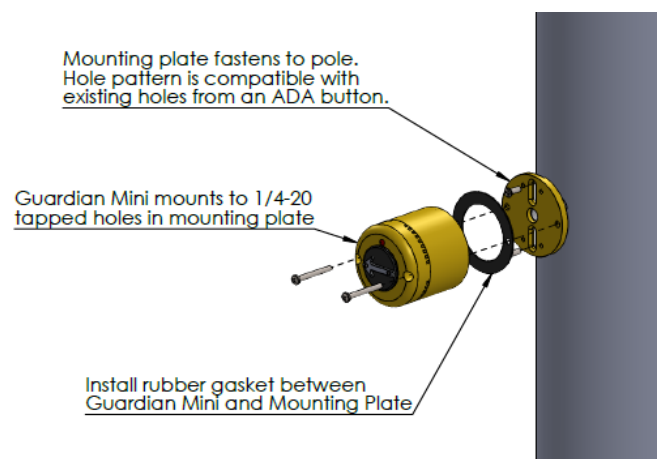


Figure 2

3.2.3 Signal Power Interface Installation

Do not set the SPI on the bottom of the Pedestrian Signal Head. Failure to attach the SPI vertically on the back surface wall can expose the power supply to water damage and will void the warranty of the SPI.

Warning! All SPI leads become hot when at least one of the wires is connected. Disconnect the power to the Pedestrian Signal Head prior to SPI installation

1. Disconnect the power going to the Pedestrian Signal Head prior to installing the SPI.
2. Open the Pedestrian Signal Head Display and locate a ¼-20 tapped hole on the back wall close to the 120VAC three position barrier strip as shown in Figure 3.
3. Mount the SPI horizontally using a 1/4-20 1" FHP. It is important that the wires coming out of each side of the SPI sag below the SPI to prevent water from running down the wires, into the SPI. Figure 3 shows the drip loop in the 120 VAC lines and its location to the barrier terminal inside the Pedestrian Signal Head.
4. Attach the four wires from the Guardian Mini to the four position terminal block on the SPI following the connections shown in **Error! Reference source not found.**
5. Connect the three 16 AWG wires from the SPI to the three position terminal block for the pedestrian signal display.
6. Restore power to the signal head and verify that the station operates

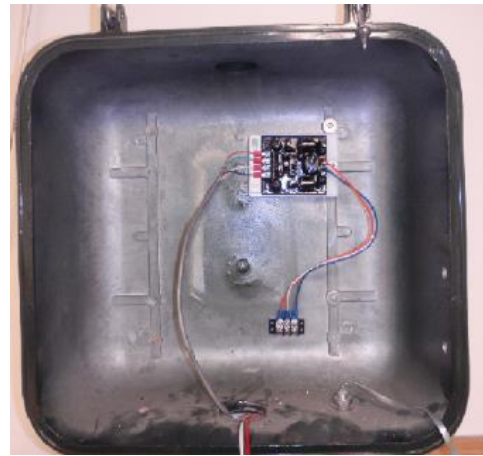


Figure 3. SPI Installed

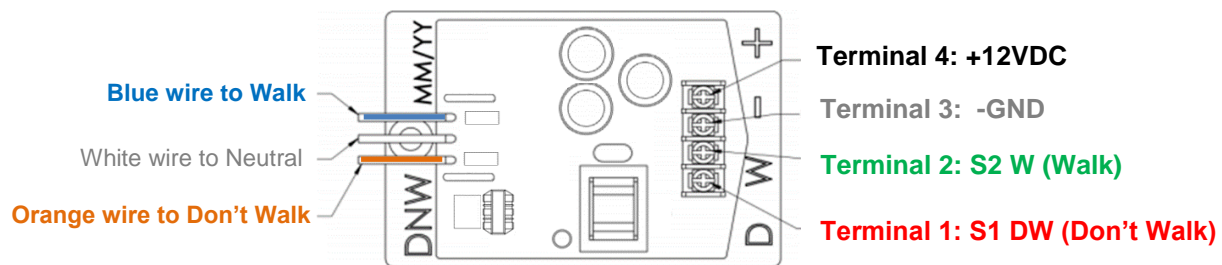


Figure 4

4 Post Installation

4.1 Operational Check

1. Make sure the station is securely attached to the pole with the arrow pointing to the crosswalk.
2. Verify that the SPI is mounted horizontally in the signal head with the wiring sagging below.
3. When first powered up, an audible locator tone will be present at the station. The locator tone should be audible 6-12 feet from the station.
4. Depress the push button and verify that the LED turns on with an acknowledgement message. If pedestrian field wires are connected to the station, verify that pedestrian call is transmitted to the traffic controller.
5. Following a momentary press, verify the Walk message present and the vibro-tactile surface vibrates when the walk sign is on.
6. Repeat again with an extended press. This time the location message should sound and walk message should sound when the walk sign is on.
7. After the Walk message, verify that an audible locator tone is present during the clearance (Flashing Don't Walk).
8. Recheck all units for a full cycle to ensure all options and features operate as desired.

5 Appendix A: Acronyms, Abbreviations & Definitions

| Term | Meaning |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Guardian Mini APS | Fully integrated APS station that contains the microcontroller, push button, speaker, adapter plate |
| Extended Press | On APS, holding the pedestrian push button down may activate special features, including audible beaoning and extended pedestrian clearance interval. |
| Intersection Worksheet | Intersection Map of street names and station locations provided with installation packet. |
| Signal Power Interface (SPI) | Power Source for the Guardian Mini that interfaces with Pedestrian Signal Head power. |
| Station ID | Identification number of station for location and custom messaging |