

## WFLN Series

### Wireless Field Panel Transceiver (FPX)

(Version 2)



Figure 1. Wireless Field Panel Transceiver.

### Product Description

The Wireless Field Panel Transceiver (FPX) is mounted at or near the field panel and is powered by 24 Vac. The antenna can be mounted either directly to the radio or remotely, for installations where the location of the FPX would cause the antenna to be shielded—for example, when the FPX is mounted inside a field panel enclosure.

### Product Numbers

563-055	Wireless Field Panel Transceiver (FPX) with WRTS Support (Version 2.x)
563-007	Direct Mount Antenna
563-008	Remote Mount Antenna



Transceivers do not come with antennas. Antennas must be ordered separately.

### Accessories

563-027	Pre-terminated Cable Kit Includes two 14 in. (36 cm) cables: – Power – Communication
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### Related Products

#### Wireless Field Level Network (WFLN)

563-054	Wireless Field Level Network Transceiver (FLNX)
563-056	Wireless Transceiver Tool (TLX)
QAA2290.EWSC	Wireless TEC Room Temperature Sensor (WRTS) – Sensing only
QAA2290.DWSC	Wireless TEC Room Temperature Sensor (WRTS) – Sensing with Temperature Display
QAA2290.FWSC	Wireless TEC Room Temperature Sensor (WRTS) – Sensing with Override, Setpoint, and Temperature Display

### Expected Installation Time

10 minutes

### Required Tools and Materials

- Electro-static discharge wrist strap
- Small flat-blade screwdriver
- Cordless drill/driver set

### Prerequisites

- All wiring must conform to NEC and local codes and regulations.
- 24 Vac Class II power source is available.
- Any application specific hardware or device is installed.

## Antenna Mounting

### Direct Mount Antenna

The preferred mounting configuration is to mount the FPX outside the field panel enclosure in a location where it will establish the maximum number of

communication links with Wireless Field Level Network Transceivers (FLNXs). For example, for a VAV application this will likely be above the field panel in the ceiling plenum (Figure 2).

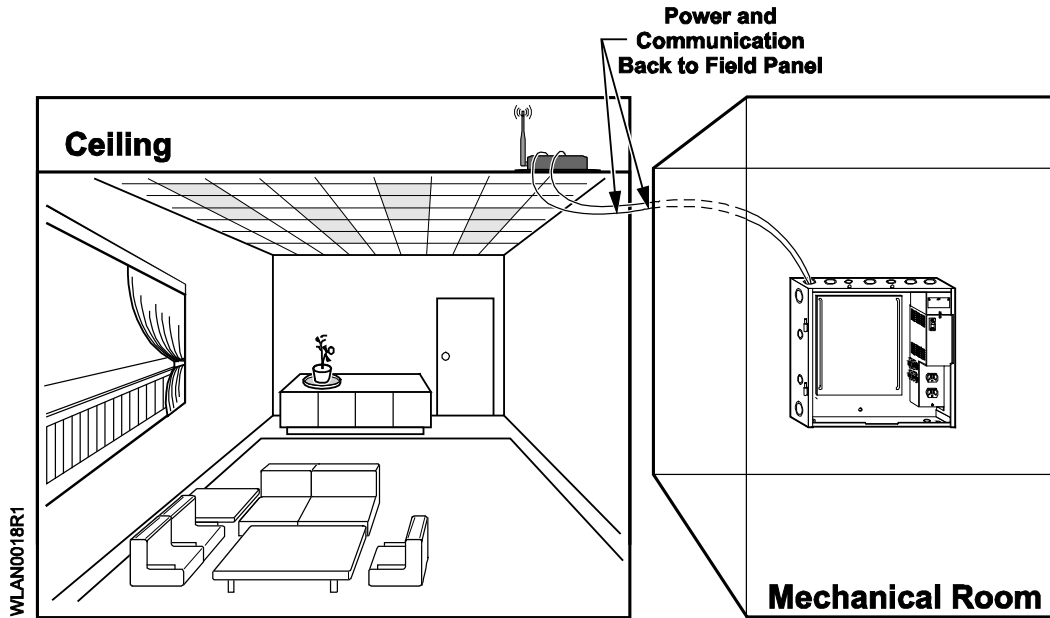


Figure 2. Radio Mounted Outside Field Panel Enclosure.

### Remote Mount Antenna

The FPX is mounted inside the field panel enclosure and the antenna is brought through a 1/2 in. (1.3 cm) knockout with the antenna extending out the top of the cabinet (Figure 3).



The antenna extension cable is 12 in. (30 cm) long.



The cable for the remote mount antenna will cause a slight reduction in the FPX's power and range, compared to using a direct mount antenna.

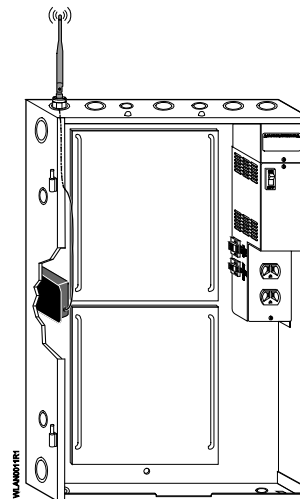


Figure 3. Radio Mounted Inside Field Panel Enclosure.

## Installation

1. Determine the optimal location of the FPX and antenna for RF communications.
2. Mount the FPX using the provided screws.  
 You can also use double-sided tape or VELCRO® fasteners.
3. Set the **Channel** and **Network ID** switches to the settings selected for the WFLN.
4. Connect the communication port of the field panel to the FPX. The maximum cable length is 4000 ft (1219 m).
5. Connect to 24 Vac power.
6. Connect the antenna. **Be sure the antenna is securely connected to the FPX.**

For a remote mount antenna, do the following:

- a. Locate the liquid tight fitting so the antenna extension cable does not incur excessive pull force. At the enclosure, punch a 1/2 in. (1.3 cm) knockout and use the locknut to secure the body of the liquid tight fitting into the knockout.
  - b. Route the antenna through the body of the liquid tight fitting (Figure 4). Hand-tighten the liquid tight fitting nut to secure the antenna in place.
7. Position the antenna in a vertical orientation (up or down).



Make certain the liquid tight fitting nut tightens on the antenna base, not the antenna itself, so the antenna can be adjusted.

The installation is complete.



To temporarily power an FPX, such as for a site survey, you can use a common 9V battery. Use a battery snap connector, available from a retail electronics store, and connect the battery as shown in Figure 5.

The battery will power the FPX for approximately four to six hours.

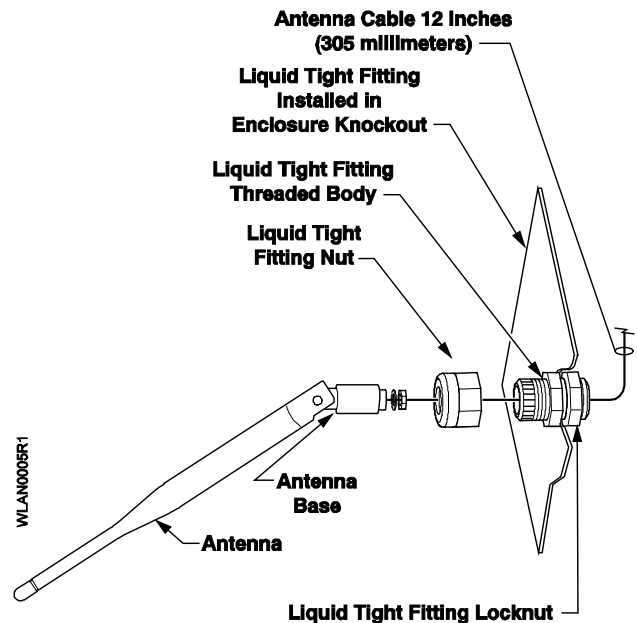


Figure 4. Remote Mount Antenna.

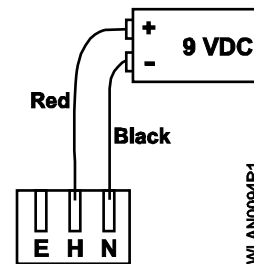


Figure 5. Battery Snap Connector Wiring.

## FCC Notes

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To comply with FCC's RF exposure limits for general population/uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

## FCC Interference Statement (Part 15.105 (b))

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## Industrie Canada Certification

This device has been designed to operate with an antenna having a maximum gain of 5dBi. An antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50Ω.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication.

The Wireless Field Panel Transceiver (FPX) is to be installed or replaced by professional installation personnel only.

## DGT Interference Statement (Taiwan)

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

According to "Administrative Regulations on Low Power Radio Waves Radiated Devices" Without permission granted by the DGT, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to a approved low power radio-frequency devices. The low power radio-frequency devices shall not influence aircraft security and interfere legal communications; If found, the user shall cease operating immediately until no interference is achieved. The said legal communications means radio communications is operated in compliance with the Telecommunications Act. The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

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