

FX Supervisory Controller Wireless TEC Option Card Installation Instructions

Applications

The FX Supervisory Controller Wireless TEC Option Card provides communications capability between wireless TECs and the FX Supervisory Controllers. Only one Wireless TEC Option card is supported per FX Supervisory Controller.

You must install the Wireless TEC Option Card in Option Slot 1 (where it operates as COM1) of the FX Supervisory Controller. Installation of the Wireless TEC Option Card disables the RS-232 serial port on the FX Supervisory Controller during normal operation.

For related information on FX Supervisory Controller mounting and wiring, refer to the following documents:

- *FX20/FX60 Installation Instructions (Part Number 24-10174-77)*
- *FX22/FX62 Supervisory Controllers Installation Instructions (Part No. 24-10564-9)*
- *FX70 Supervisory Controller Installation Instructions (Part No. 24-10564-17)*

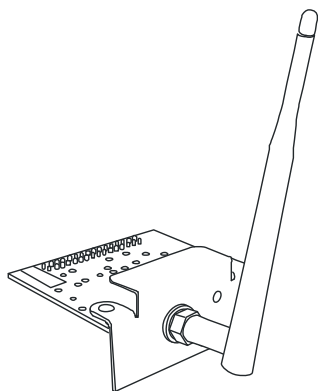


Figure 1: FX Supervisory Controller Wireless TEC Option Card

North American Emissions Compliance

United States

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

Canada

This Class (A) digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la Classe (A) respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Installation

Unpack the Wireless TEC Option Card and inspect the contents of the package for damaged or missing components. If the option card is damaged, notify the appropriate carrier and return any damaged components for repair or replacement.

Parts Included

Included in this package are the following items:

- one Wireless TEC Option Card
- one local antenna
- one metal mounting bracket
- one retaining nut with lock washer
- *FX Supervisory Controller Wireless TEC Option Card Installation Instructions (Part Number 24-10174-85)*

Special Tools Needed

To install the RS-232 card, use a number 2 Phillips screwdriver.



WARNING: Risk of Electric Shock.

Disconnect the power supply before making electrical connections. Contact with components carrying hazardous voltage can cause electric shock and may result in injury or death.

IMPORTANT: Make sure to plug any option card into its connector properly (pins aligned).

IMPORTANT: Avoid hot plug-in or the removal of any option card from the FX Supervisory Controller (or other accessory module). This means you must first remove power from the unit.

Mounting

Mounting the Wireless TEC Option Card onto the FX Supervisory Controller

If installing the Wireless TEC option card in an FX20, FX202, FX60, or FX602 Supervisory Controller, you must install it in Option Slot 1, where it operates as COM1. When installed in an FX20, FX202, FX60, or FX602, the Wireless TEC option card disables the onboard RS-232 serial port during normal operation.

If installing the Wireless TEC option card in an FX70, you may install it in either Option Slot 1 or 2. It operates as COM3 if installed in the FX70's Option Slot 1, and operates as COM4 if installed in Option Slot 2. When installed in an FX70, the Wireless TEC option card does not disable the FX70's RS-232 serial port. See Table 1 for COM port assignments.

To mount the Wireless TEC Option Card into the FX Supervisory Controller:

1. Remove power from FX Supervisory Controller.
 2. Remove the FX Supervisory Controller cover (FX20/FX60/FX70) or covers (FX202/FX602).

If the controller is an FX20/FX60/FX70, press in the four tabs on both ends of the controller and lift off the cover.

If the controller is an FX22/FX62, remove the right cover, then the left cover, retaining the two screws that secure each cover.
- Note:** If accessory modules are plugged into the FX20/FX60/FX70 Supervisory Controller, you may need to slide them away from the unit to access the cover tabs.
3. For the FX20/FX60/FX70, remove the battery and bracket assembly by taking out the four screws holding the bracket in place. Set the screws aside for later.
 4. Unplug the battery from the connector on the FX20/FX60/FX70 Supervisory Controller (Figure 2).

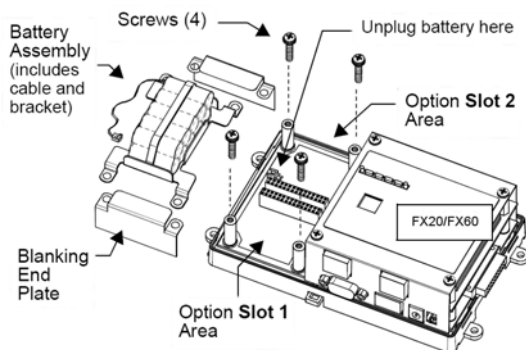


Figure 2: Removing Battery Assembly

5. Remove the front blanking end plate for Option Slot 1. Retain the blanking end plate in case you want to remove the option card at a later date.
6. Assemble the metal mounting bracket to the Wireless TEC Option Card so that the reset button and status Light-Emitting Diode (LED) are aligned with the required holes in the bracket. Secure with the retaining nut and lock washer (see Figure 3).
7. Carefully insert the pins of the Wireless TEC Option card into the socket of Option Slot 1. The mounting holes on the Wireless TEC Option Card should line up with the standoffs on the FX Supervisory Controller. If they do not line up, the connector is not properly aligned.

8. Press until the Wireless Option card is completely seated.

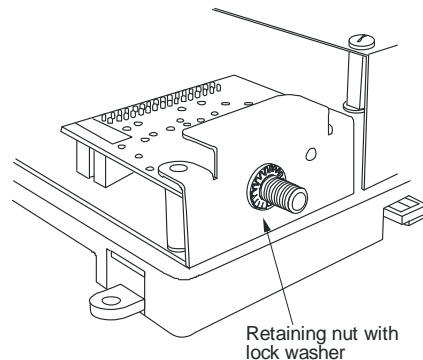


Figure 3: Mounted Wireless TEC Option Card

9. For an FX20/FX60/FX70 controller, plug the battery cable into the battery connector on the controller. See Figure 2 for the location.
10. For an FX20/FX60/FX70 controller, set the battery and bracket assembly back over the option card slots, with the mounting holes aligned with the standoffs.
11. For an FX20/FX60/FX70 controller, place the four screws through the battery bracket, end plates, and into the standoffs on the controller. Hand tighten these screws with the screwdriver.

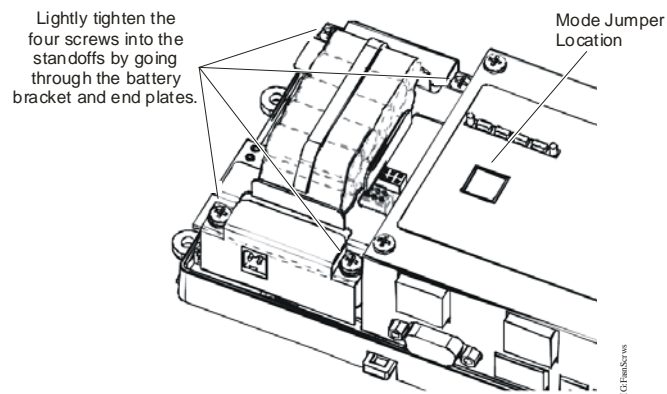


Figure 4: Refasten Screws

12. Replace the FX Supervisory Controller cover or covers. If accessory modules were unplugged, plug them back into the FX Supervisory Controller as before, and secure.
13. Screw antenna into the Wireless TEC Option Card.

Mounting the Remote Antenna

IMPORTANT Use the antenna provided. Do not alter the antenna in any way or use another antenna. Do not modify the antenna cable in any way.

IMPORTANT Minimum bend radius for the antenna cable is 25 mm (1 in.). Any bend with a smaller radius may damage the cable.

To mount the remote antenna:

1. Ensure that the selected location has line-of-sight to one or more Wireless TEC Thermostat Controllers.
2. Gently screw the female connection of the remote antenna onto the FX Supervisory Controller antenna connector.
3. Mount the remote antenna on a metal surface, using the weighted magnetic base.

Repair Information

If the Wireless TEC Option Card fails to operate within its specifications, replace the unit. For a replacement option card, contact the nearest Johnson Controls® representative.

Operation

LEDs

One LED is visible on the side of the Wireless TEC Option Card and indicates the following status:

- **1 short blink:** power on
- **2 short blinks:** power on and card memory properly initialized
- **3 short blinks:** power on, card memory properly initialized, and active communication with FX Supervisory Controller
- **4 short blinks:** power on, card memory properly initialized, active communication with FX Supervisory Controller, and wireless network successfully started
- **4 short blinks and 1 long blink:** power on, card memory properly initialized, active communication with FX Supervisory Controller, wireless network successfully started, and active communication with TECs.

Serial Shell Notes

If the Wireless TEC Option Card is installed in an FX20, FX202, FX60, or FX602, and you move the controller's mode jumper to the Serial Shell position (see Figure 4), the FX20/FX202/FX60/FX602's base RS-232 port becomes active immediately following a reboot. This scenario allows an RS-232 connection to the serial shell for debugging purposes. The Wireless TEC Option Card is inoperative during this period.

To re-enable the Wireless TEC Option Card, reposition the mode jumper to the Normal position, and reboot the FX20/FX202/FX60/FX602 Controller.

Table 1: Wireless TEC Card Installation

Controller	FX20/FX60	FX22/FX62
Wireless Option Card	Only 1 Wireless TEC card supported and must be installed in Option Slot 1	Only 1 Wireless TEC card supported
Option Slot	Option Slot 1	Option Slot
COM Port	Wireless TEC = COM1 (disables onboard RS-232 port)	Wireless TEC = COM1 (disables onboard RS-232 port)



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