

FX22/FX62 Supervisory Controller GPRS Modem Option Card

Installation Instructions

LP-FXGPRSU-0

Part No. 24-10564-25, Rev. —
Issued October 29, 2010

Refer to the [QuickLIT Web site](#) for the most up-to-date version of this document.

Applications

This document describes the mounting and cabling of a General Packet Radio Service (GPRS) wireless modem option kit for FX22/FX62 Supervisory Controllers without the factory-installed onboard GPRS modem (models LP-FX2211T-0 and LP-FX6211T-0).

This GPRS modem option card is a Global System for the Mobile Communications (GSM) cellular modem option card that uses GPRS data technology. The option card has two Light-Emitting Diodes (LEDs) to indicate status and signal.

The GPRS modem option card installs into the **only** option card slot in the FX22/FX62 Supervisory Controller.

The GPRS modem option card is **not supported** if the FX22/FX62 Supervisory Controller has the factory-installed onboard GPRS modem (models LP-FX2213T-0 and LP-FX6213T-0).

At the time of this document, only a Subscriber Identity Module (SIM) card provisioned by the Wyleless™ Group is supported for use in the United States.

For the software configuration and operation of the installed GPRS modem option, refer to:

- *FX GPRS Modem Technical Bulletin (LIT-12011639)*

For information on mounting and wiring an FX22/FX62 Supervisory Controller, refer to:

- *FX22/FX62 Supervisory Controller Installation Instructions (Part No. 24-10564-9)*

For installation details on the GPRS modem option (LP-FXGPRSU-0) for FX20/FX60/FX70 Supervisory Controllers, refer to:

- *FX20/FX60/FX70 GPRS Installation Instructions (Part No. 24-10564-68)*

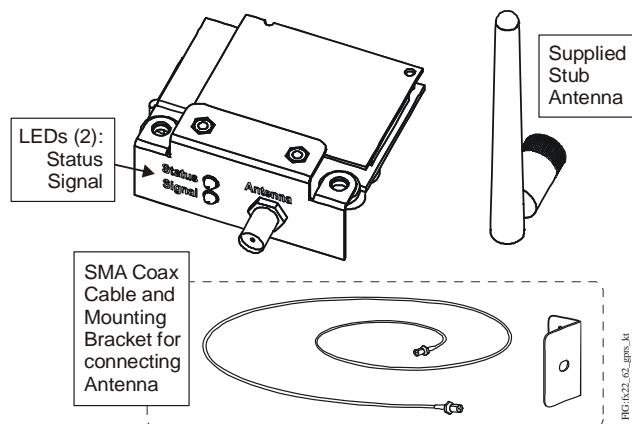


Figure 1: FX22/FX62 GPRS Modem Option Kit

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 the 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

Parts Included

This package includes the following items:

- a GPRS modem option card, with pre-attached end plate
- a Wyless provisioned SIM card, ready for Pre-installation
- a right-angle GSM/GPRS quad-band SubMiniature version A (SMA) coax mounted stub antenna
- an antenna mounting bracket
- a 6.56 ft (2 m) SMA coax antenna cable
- this *FX22/FX62 Supervisory Controller GPRS Modem Option Card Installation Instructions (Part No. 24-10564-25)*

Special Tools Needed

The following supplies and tools are required:

- #1 and #2 Phillips screwdrivers: to remove and refasten covers on the FX22/FX62 Supervisory Controller, and to install the GPRS modem card.
- Any other tools needed for mounting the antenna bracket. See Figure 8 for bracket details.

Mounting

Pre-installation

Prior to mounting the GPRS modem option card in the FX22/FX62 Supervisory Controller, install the SIM card into the connector on the underside of the option card.

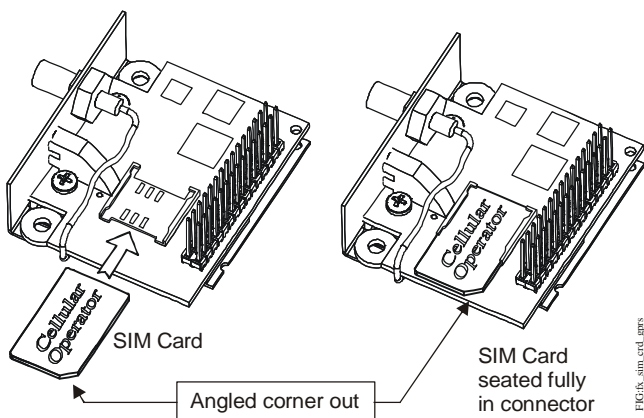


Figure 2: Inserting SIM Card into Underside of GPRS Modem

To install the SIM card, orient the card with its foil connectors down (writing side up) and its angled corner out, and slide the card fully into the connector (see Figure 2).

Mounting the GPRS Modem Option Card



WARNING: Risk of Electric Shock.

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

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

Mount the GPRS modem option card in the only option card slot of the FX22/FX62 Supervisory Controller.

1. Remove power from the FX22/FX62 Supervisory Controller. Wait for all LEDs to turn off.
2. Use a #1 Phillips screwdriver to remove the right cover first (see Figure 3). Set the two screws aside.

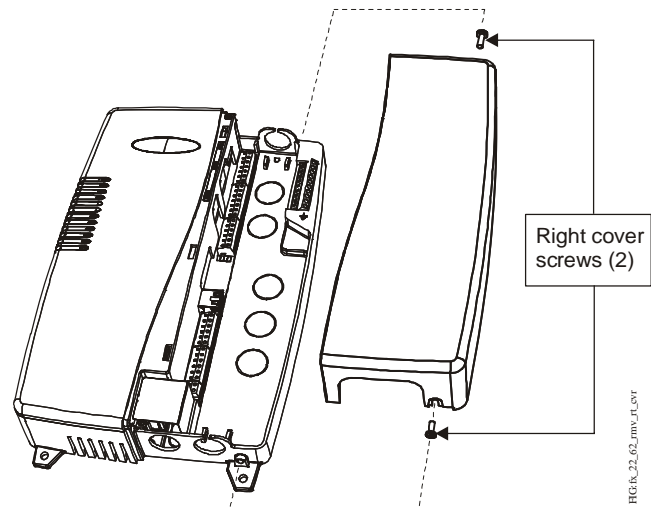


Figure 3: Right Cover Removal and Replacement

3. Remove the left cover next (see Figure 4). Set the two screws aside.

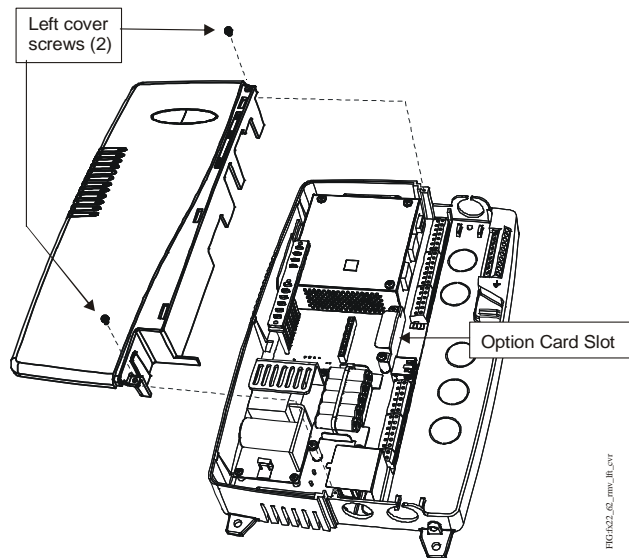


Figure 4: Left Cover Removal and Replacement

4. Use a #2 Phillips screwdriver to remove the blanking plate from the FX22/FX62 Supervisory Controller's option card slot.
5. Carefully insert the pins of the GPRS modem option card into the socket of the option card slot. Line up the mounting holes on the end plate with the standoffs on the base board. If the mounting holes and standoffs do not line up, the connector is not properly aligned.

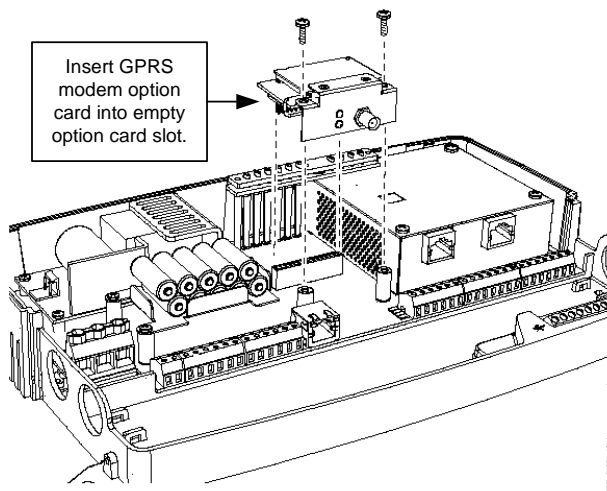


Figure 5: Insert the GPRS Modem Option Card with Pins Aligned

6. Press the option card until it is completely seated.
7. Place the two screws through the option card end plate and into the standoffs on the FX22/FX62 Supervisory Controller base board. Hand tighten these screws (see Figure 6).
8. Replace the **left** cover (see Figure 4) and refasten with the two screws set aside.

Note: Leave the right cover off for the Antenna Installation. You may wish to leave the right cover off until you complete Modem Checkout on page 4, so you can see the LEDs.

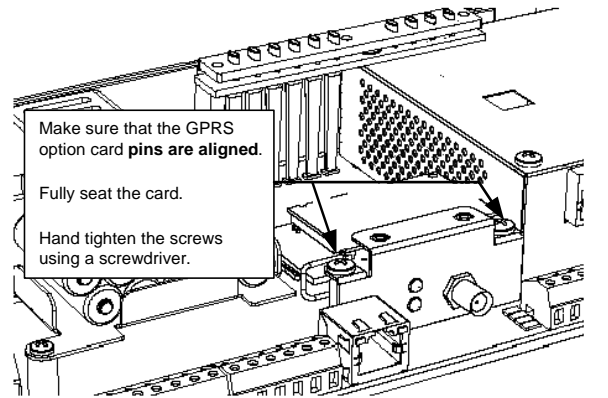


Figure 6: GPRS Modem Option Card Inserted, Screws Tightened

Antenna Installation

1. Route the included SMA coax cable through the appropriate wiring knockout of the FX22/FX62 Supervisory Controller (top, bottom, or back), and attach the cable to the GPRS modem option card (see Figure 7).

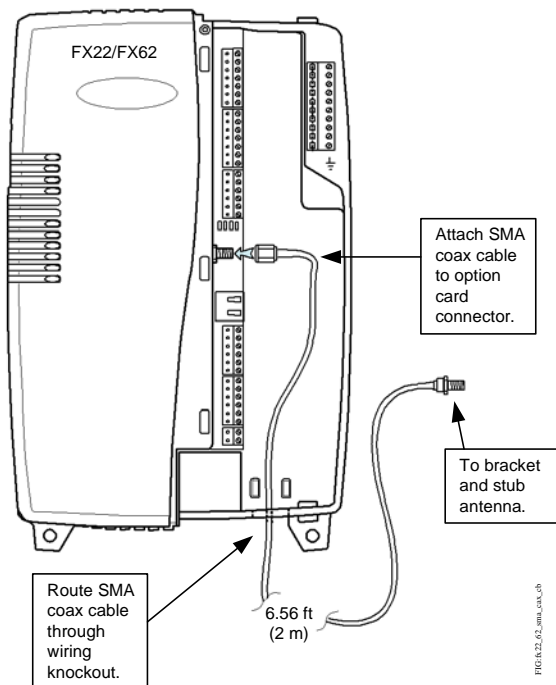


Figure 7: SMA Coax Cable Routed Through Knockout

2. Mount the antenna bracket within reach of the 6.56 ft (2 m) SMA-type coax extension cable. Figure 8 shows the bracket details and dimensions.

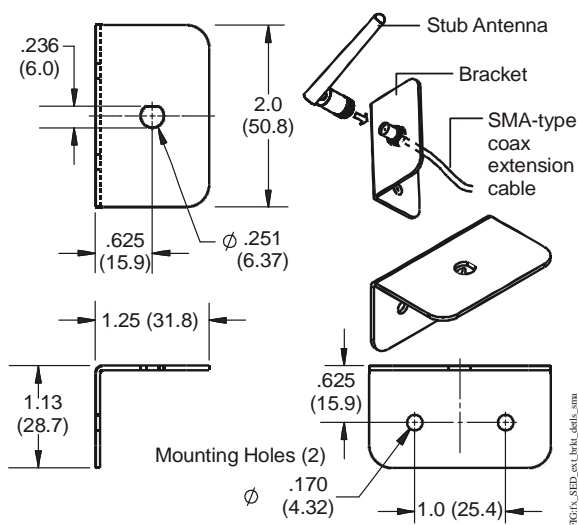


Figure 8: Extension Cable and Antenna Mounting Bracket Dimensions, in. (mm)

3. Fasten the end of the SMA coax cable in the mounting bracket and attach the antenna by finger tightening the knurled nut.
4. Rotate the antenna to whatever position you need for mounting clearance and/or best reception.

Note: Some installations may require a different external antenna.

Note: Any external antenna must be compatible with the GSM 900/1,800 frequency and the 50-ohm impedance of the SMA coax connector on the GPRS modem option.

Operation

LEDs

Two LEDs appear on the end plate of the GPRS modem option card. On the option card label, these LEDs appear as STATUS and SIGNAL (Figure 1).

These two LEDs are briefly described as follows:

- STATUS (green) — Flashes various LED patterns based on the state of the modem. This LED is directly under control of the modem itself (rather than the modem driver).

Upon initial power-up, the Status LED pattern is typically 600 ms On/600 ms Off, and may change depending on various modem state changes.

- SIGNAL (green) — Indicates the Received Signal Strength Indicator (RSSI), according to the number of short (350 ms On) flash patterns. (Analogous to **number of bars** on a cell phone.)

For further details on the operation of both LEDs, refer to the *FX GPRS Modem Technical Bulletin* (LIT-12011639).

Modem Checkout

Note: The controller's right cover must be off to see the two LEDs on the GPRS modem option card. After modem checkout, replace the right cover (see Figure 3).

After mounting the GPRS option card and completing the antenna installation, power on the FX22/FX62 Supervisory Controller. Following a reboot of the FX22/FX62 Supervisory Controller, you can configure the modem by opening a platform connection to the FX22/FX62.

To verify modem communications, verify that status properties in the **GPRS Modem Configuration** platform view display returned values.

Repair Information

If the GPRS modem option card fails to operate within its specifications, replace the unit. For a replacement GPRS option card, contact the nearest Johnson Controls® representative.

Options and Parts

Standard replacement parts are listed in Table 1.

Table 1: Parts for GPRS Modem Option Card

Order Code	Description
LP-FXGPRSE-0	Includes a 6.56 ft (2 m) SMA-type coax extension cable and steel bracket for wall or panel mounting of the GPRS Modem antenna.
LP-FXGPRSS-0	Replacement SIM card, provisioned by Wyless.
LP-KITGPRSA-0	Replacement right-angle GSM/GPRS quad-band SMA coax mounted stub antenna.

Approvals

Federal Communications Commission (FCC): The Siemens® TC63 cellular communications module used on the LP-FXGPRSU-0 modem option card is FCC approved, and has an FCC ID of QIPTC63.

COM Slot Assignments

Table 2 lists the COM slot assignments for the FX22/FX62 Controller with a GPRS modem.

Table 2: COM Slot Assignments for the FX22/FX62 Controller with a GPRS Modem

FX22/FX62
Only one GPRS card supported
Option Slot
GPRS = COM7, COM8



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