

FX Supervisory Controllers LON Card Installation Instructions

Application

The LON option card provides LONWORKS® Free Topology Transceiver (FTT)-10A communications capability to the FX Supervisory Controllers. See Figure 1.

For the FX20/FX60/FX70 Supervisory Controllers, up to two LON option cards may be installed. If one LON option card is installed, it operates as LON1, regardless of the slot used. If two LON option cards are installed, LON1 is Option Slot 1 and LON2 is Option Slot 2 (see Figure 4 for locations of option slots).

FX22/FX62 Supervisory Controllers have only one option card slot and can only accept one LON option card.

For related information on FX Supervisory Controllers mounting and wiring, refer to the *FX Supervisory Controllers Installation Instructions* (Part No. 24-10174-77).

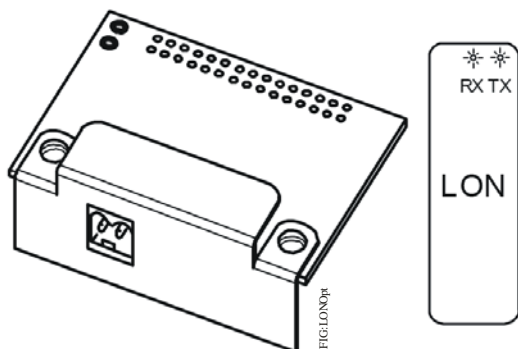


Figure 1: FX20/FX60 LON Card

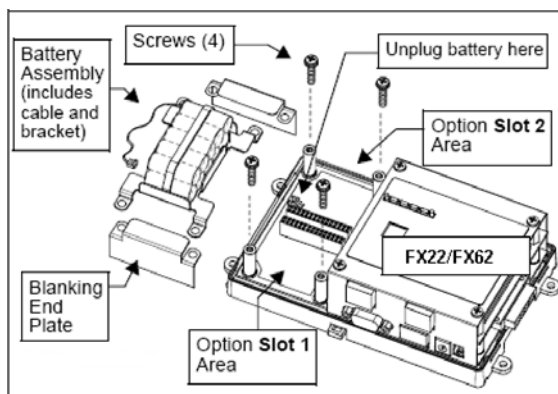


Figure 2: FX22/FX62

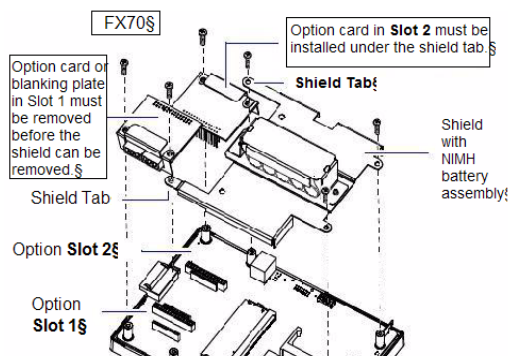


Figure 3: FX70 LON Card

Important : For the FX70, carefully pry up the shield tab to install the option card under the tab. Do not install the option card in slot 2 with the card resting on top of the shield tab. Otherwise, an electrical short or some other issue from misaligned card header pins may result.

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

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

Included in this package are the following items:

- one LON option card, along with connector end plate
- one 2-position terminal plug for wiring to a LONWORKS Twisted Pair/Free Topology (TP/FT)-10 network
- *FX Supervisory Controllers LON Card Installation Instructions (Part No. 24-10174-34)*

Special Tools Needed

The following supplies and tools are required for installation:

- #2 Phillips screwdriver: used to install the LON card
- small flat-blade screwdriver: used for making wiring connections to the LONWORKS network.

Safety Precautions

The following information relates to the installation and startup of the LON 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).

IMPORTANT: Avoid hot plug-in or removal of any option card from the FX Supervisory Controllers; that is, do not remove any card with power applied. If the unit switches to battery operation, wait for all Light Emitting Diodes (LEDs) to go out.

Mounting

Mount the LON card in either of the option card slots on the FX Supervisory Controllers, as available. Follow these instructions:

1. Remove power from the FX Supervisory Controllers.
 2. Remove the FX Supervisory Controller cover (FX20/FX60/FX70) or covers (FX22/FX62). For the FX20/FX60/FX70, press in the four tabs on both ends of the controller and lift off the cover. For the FX22/FX62, first remove the right cover, then the left cover, retaining the two screws that secure each cover.
- Note:** If accessory modules are plugged into the FX Supervisory Controller, you may need to slide them away from the unit to access the cover tabs.
3. For the FX20/FX60/FX70 Supervisory Controllers, remove the battery and bracket assembly by taking out the four screws holding it in place. Set the screws aside for later.
 4. Unplug the battery from the connector on the FX Supervisory Controller (see Figure 4).

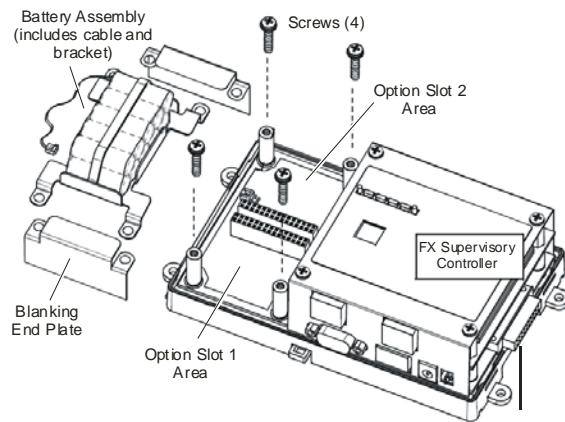


Figure 4: Removing Battery Assembly

5. Remove the blanking end plate for the slot into which you are installing the option card. Retain the blanking end plate in case you need to remove the option card at a later date.
6. Carefully insert the pins of the LON card into the socket of the appropriate option card slot. The mounting holes on the LON card should line up with the standoffs on the FX Supervisory Controller. If they do not, the connector is not properly aligned. Press until the LON card is completely seated.
7. Place the custom end plate that came with the LON card over its connector (see Figure 5).

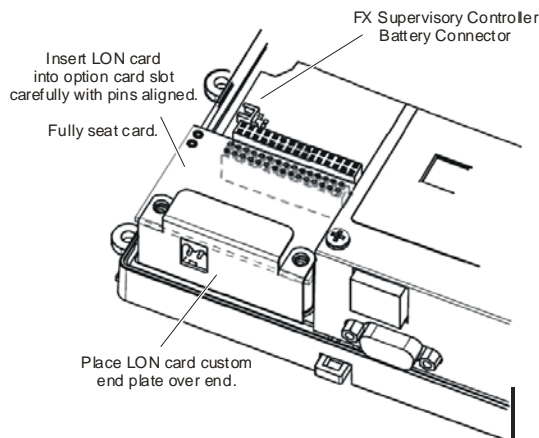


Figure 5: Inserting LON Card

8. Plug the battery cable into the battery connector on the FX Supervisory Controller (see Figure 5 for location).
9. For the FX20/FX60/FX70 Supervisory Controller, set the battery and bracket assembly back over the option card slots, with the mounting holes aligned with the standoffs.
10. Place the four screws through the battery bracket, through the end plates, and into the standoffs on the FX Supervisory Controller (Figure 6). Lightly tighten these screws with a screwdriver.

Lightly tighten the four screws into the standoffs by going through the battery bracket and end plates.

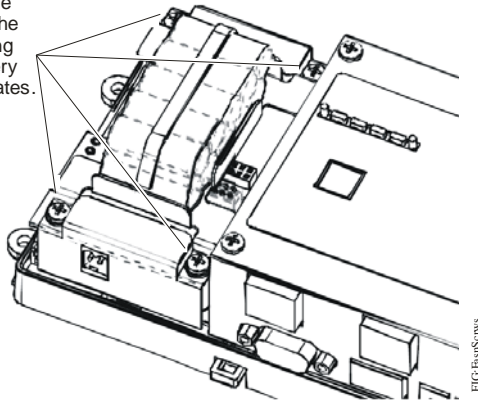


Figure 6: Refastening Screws

11. Replace the FX Supervisory Controller cover. If accessory modules were unplugged, plug them back into the FX Supervisory Controller as before, and secure.

Wiring

Connect the LONWORKS network communications wiring to the 2-position connector of the LON card. Polarity is not a factor with LONWORKS TP/FT wiring.

Refer to the *LONWORKS FTT-10A Free Topology Transceiver User's Guide (078-0156-01)* for technical guidelines associated with free topology restrictions. Refer to the *Junction Box and Wiring Guidelines for Twisted Pair LONWORKS Networks (005-0023-01)* for more detailed information on wiring specifications. These documents are available on the Echelon® Web site (www.echelon.com).

Operation

LEDs

Two LEDs are visible on the top of the LON option card. To see them, remove the cover from the FX Supervisory Controller. The LEDs operate as follows:

- RX (green): Receive—indicates that another LONWORKS device is transmitting a message.
- TX (yellow): Transmit—indicates that the FX Supervisory Controller is transmitting a message on the LONWORKS network.

These LEDs are labeled on the top of the LON card (see Figure 1).

Repair Information

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



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