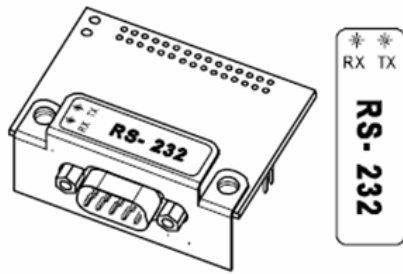


## FX Supervisory Controllers RS-232 Card Installation Instructions

### Applications

The RS-232 option card provides RS-232 communications capability to the FX Supervisory Controllers. You can install up to two RS-232 option cards per FX Supervisory Controller (one per FX22/FX62). The port assignments are shown in **Error! Reference source not found.**

For related information on FX Supervisory Controllers mounting and wiring, refer to the *FX Supervisory Controllers Installation Instructions (Part Number 24-10174-77)*.



**Figure 1: FX Supervisory Controllers  
RS-232 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 RS-232 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 RS-232 option card, along with connector end plate
- *FX Supervisory Controllers RS-232 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 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 Controllers (or other accessory module). This means you must first remove power from the unit.

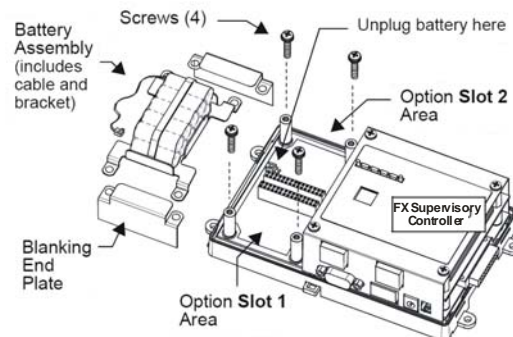
## Mounting

### Mounting the RS-232 Card onto the FX Supervisory Controllers

Mount the RS-232 card in either of the option card slots on the FX Supervisory Controllers, as available.

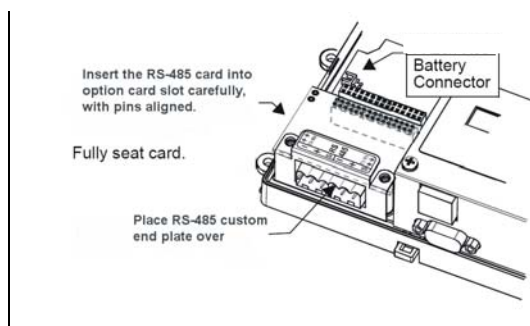
To mount the RS-232 card onto the FX20/FX60 Supervisory Controllers:

1. Remove power from FX Supervisory Controller.
  2. Remove the FX Supervisory Controller cover. To do this, press in the four tabs on both ends of the FX Supervisory Controller and lift off the cover.
- Note:** If accessory modules are plugged into the FX Supervisory Controllers, you may need to slide them away from the unit to access the cover tabs.
3. 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 FX Supervisory Controllers (Figure 2).



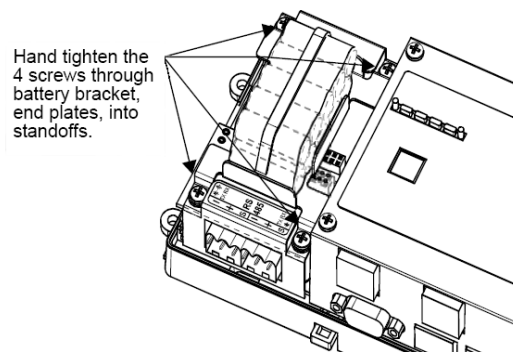
**Figure 2: Removing Battery Assembly**

5. Remove the blanking end plate for the slot you are installing the option card into. Retain the blanking end plate in case you want to remove the option card at a later date.
6. Carefully insert the pins of the RS-232 card into the socket of the appropriate option card slot. The mounting holes on the RS-232 card should line up with the standoffs on the FX Supervisory Controllers. If they do not line up, the connector is not properly aligned.
7. Press until the RS-232 card is completely seated.
8. Place the custom end plate that came with the RS-232 card over its connector (Figure 3).



**Figure 3: Inserting RS-232 Card**

9. Plug the battery cable into the battery connector on the FX Supervisory Controller. See Figure 2 for the location.
10. Set the battery and bracket assembly back over the option card slots, with the mounting holes aligned with the standoffs.
11. Place the four screws through the battery bracket, end plates, and into the standoffs on the FX Supervisory Controller. Hand tighten these screws with screwdriver.



**Figure 4: Refasten Screws**

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

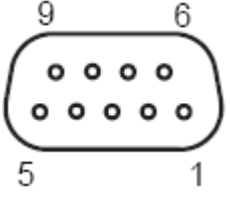
### Wiring

The RS-232 card uses standard DB-9M plug and pinouts (it is identical to the RS-232 port on the FX Supervisory Controller base). To connect the FX Supervisory Controller RS-232 card with a Data Terminal Equipment (DTE) device, use a null modem cable with DB9 connector.

**Table 1: RS-232 Card Port Assignments**

FX20/FX60		FX70		FX202/FX602
Up to 2 RS-232 cards supported		Up to 2 RS-232 cards supported		Only 1 RS-232 card supported
Option Slot 1	Option Slot 2	Option Slot 1	Option Slot 2	Option Slot
RS-232 = COM3	RS-232 = COM4	RS-232 = COM5	RS-232 = COM6	RS-232 = COM7
RS-485 = COM3, COM4	RS-232 = COM5	RS-485 = COM5, COM6	RS-232 = COM7	
LON = LON1	RS-232 = COM3	LON = LON1	RS-232 = COM5	
Wireless TEC = COM1	RS-232 = COM3	NA	NA	
Sedona = COM3	RS-232 = COM4	Sedona = COM5	RS-232 = COM6	
Modem = COM1	RS-232 = COM3	Modem = COM3	RS-232 = COM5	
GPRS = COM3, COM4	RS-232 = COM5	GPRS = COM5, COM6	RS-232 = COM7	

**Table 2: COM Assignment for RS-232 Card in Option Slot 2**

Pinout References	Signal		DB-9 Plug Pin
<b>DB-9 Plug (Male)</b> 	DCD	Data carrier detect	1
	RXD	Receive data	2
	TXD	Transmit data	3
	DTR	Data terminal ready	4
	GND	Ground	5
	DSR	Data set ready	6
	RTS	Request to send	7
	CTS	Clear to send	8
			9

## Repair Information

If the RS-232 option card fails to operate within its specifications, replace the unit. For a replacement option card, contact the nearest Johnson Controls® representative.

## Operation

### Light-Emitting Diodes (LEDs)

Two LEDs are visible on the top of the RS-232 option card cover must be removed (from the FX20/FX60):

- **RX (green):** Receive. Indicates that the FX20/FX60 is receiving data from a device.
- **TX (yellow):** Transmit. Indicates that the FX20/FX60 is transmitting a message to a device.



**Building Efficiency**  
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