

Installation of the FMU Isocomm Surge Protection

This surge protection is provided as additional protection for communications to printers, satellite FMUs, and tank monitors in areas where there are high incidences of lightning strikes. If the application does not contain printers, satellite FMUs, or tank monitors, this protection will be of no use, and need not be installed. If the application contains printers only, a kit for printers only is available and Product Bulletin 100 contains instructions for its installation. If the application contains satellites or tank monitors without a printer, the printer Isocomm need not be installed.

If the application contains satellites, protection must be installed in the master FMU and all connected satellites. At the master FMU, the additional protection afforded by the Isocomm I/O Silver Board applies only to satellite positions 1 and 2. The connectors on the I/O Silver Board for satellites 3 and 4 do not provide Isocomm protection. Each satellite FMU, even if not tied into positions 1 or 2 in the master, should have the Isocomm option installed when it has been determined Isocomm protection is necessary.

There is additional protection available for Equipment Interface Units (EIUs). This protection is installed in the EIU enclosure and is provided as a complete replacement enclosure for the EIU. When the EIU Isocomm upgrade is installed, the FMU Isocomm upgrade should also be installed to protect communications between the EIU and master FMU.

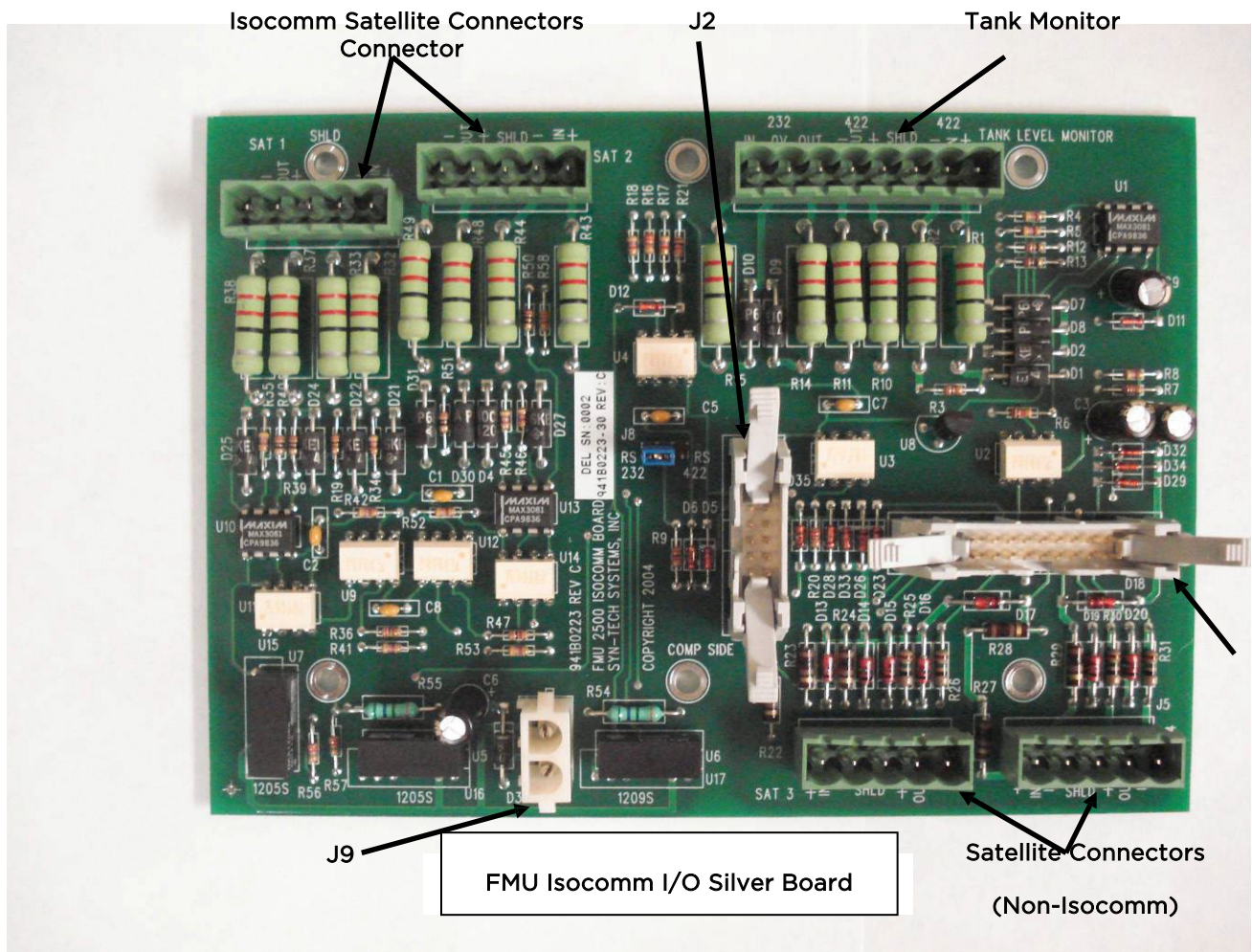
Install the FMU Isocomm Surge Protection

WARNING Failure to remove power may result in injury. Turning the FMU power switch off does not remove power from the wires exiting the conduit to the FMU. Verify power is removed before handling power wires.

1. Remove power (and verify) from the FMU.
2. Unlock and open the FMU upper cabinet and pedestal doors.
3. Remove the surge protection panel. It can be allowed to hang from its three wire harnesses, or the harnesses may be unplugged from the panel and the panel set aside.
4. Disconnect all connectors plugged into the I/O Silver Board.
5. Remove the existing I/O Silver Board from its standoffs over the Pedestal I/O Board.

NOTE The part number 941B0223B I/O Silver Board (see photos, page 2 and 3) provided with the FMU Isocomm kit will not accommodate more than 4 satellite connections. If more satellite connections are needed, an additional I/O Silver Board must be installed. Other considerations (i.e., number of relay assemblies, available slack in satellite communications cables, etc.) will determine the alternate location. Please contact Syntech Customer Satisfaction for assistance mounting a second I/O Silver Board.

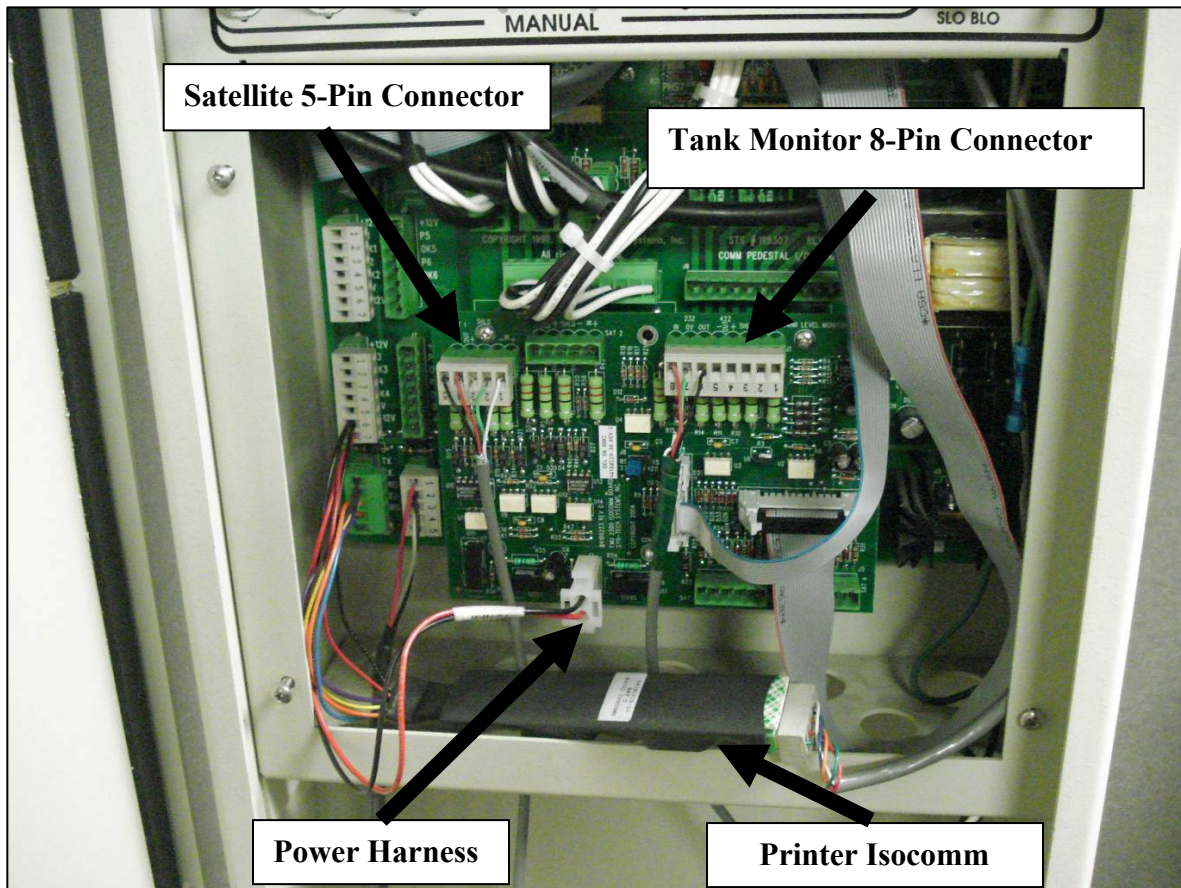
6. Install the new I/O Silver Board on the standoffs remaining from the previous I/O Silver Board installation.



7. Reconnect all cable connections to the new I/O Silver Board:
- There are 4 satellite connectors. Plug up to 4 satellite cable connections into the connectors provided. Any additional connectors must be plugged into an additional I/O Silver Board in its alternate mount location.
 - Connect the satellite ribbon cable into J4.
 - There is an 8-pin connector at J1 for tank monitor communications. The silkscreen on the I/O Silver Board describes the connections. Positions 1-3 (IN, OV, OUT) are for RS-232. Positions 4-8 (OUT-, OUT+, SHLD, IN-, IN+) are for RS-422. Connect the tank monitor communications cable into the 8-pin connector at J1 as applicable for RS-232 or RS-422.
 - Connect the tank monitor ribbon cable into J2.
8. Connect the two-wire power harness connector into J9 on the new I/O Silver Board.

NOTE A spare 7-pin connector is supplied with the Printer Isocomm Option. This connector or an existing 7-pin pulser connector in J4, J5, J6, or J7 may be used to route power to the two-wire power harness and, if applicable, to the Printer Isocomm Option. The power wires from both applications may be inserted into the same terminals of a 7-pin pulser connector.

9. Route the two loose red and black power wires from the power harness to a new or existing 7-pin pulser connector. Connect the red wire to +12V (pin 1 or 7) and the black wire to 0V (pin 6).
10. Reinsert the 7-pin pulser connector into the receptacle it was removed from, or plug a new connector into any unused receptacle at J4, J5, J6, or J7.
11. If applicable, connect the Printer Isocomm Option to the Pedestal I/O Board:
 - a. Disconnect the part number 200085 phone/printer cable from J2, and plug into the 5-pin receptacle in the end of the Printer Isocomm Option.
 - b. Plug the 5-pin connector of the Printer Isocomm Option into J2 on the Pedestal I/O Board.
 - c. Route the two loose red and black power wires to a new or existing 7-pin pulser connector. Connect the red wire to +12V (pin 1 or 7) and the black wire to 0V (pin 6).
 - d. Reinsert the 7-pin pulser connector into the receptacle it was removed from, or plug a new connector into any unused receptacle at J4, J5, J6, or J7.



CAUTION Damage to equipment may result if these instructions are not followed. Do not install the jumper referenced in step 12 and 13 if the Isocomm equipment is not installed. Communications to the printer, satellites, or tank monitor, as applicable, may be damaged.

12. (FMU Plus Only) Install a jumper to jump DC ground to earth ground:

- a. There are provisions for installation of a jumper having two male pins next to the attach screw at the lower right and upper left corner of the Main Board. A jumper is only required in one location.
- b. Insert a jumper across two empty jumper pin holes in the Main Board. A standard paper clip should insert into the jumper pin holes.
- c. Remove FMU power by turning off the FMU power switch.
- d. Solder the jumper in place.

NOTE On classic FMUs and FMU-2000, the jumper necessary to jump DC ground to earth ground must be installed on the reverse of the Power Management Board. The Power Management Board is mounted on the reverse side of the Backplate Assembly. This is not a field modification. A modified Power Management Board will be supplied with the other FMU isocomm components.

13. (FMU-2500 Classic/FMU-2000 Only) After the Isocomm equipment is installed, a jumper must be installed across two points on the Power Management Board. This is not a field modification. A replacement LRU (Backplate Assembly, Main Board, Satellite I/O Control Board) with a jumper already installed will be forwarded with the Isocomm equipment.

TIP

If any questions arise, contact Syntech Systems, Inc.'s Customer Satisfaction Center (CSC) at 1-800-888-9136, ext. 2, or email support@myfuelmaster.com.