INSTALLATION INSTRUCTIONS
NXCESUV, NXCESIR, NXCESDC
Plug-In Amplifier Card
for use with NXF4000

INTRODUCTION

The NXCESUV, NXCESIR, and NXCESDC plug-in amplifier cards provide the flame detection and monitoring capabilities to the NXF4000 control. Generally, the application and fuel type determine the type of amplifier card that should be installed. NXCESIR is recommended for multi-fuel application where fuel (oil/gas) switch-over is common or where IR energy is abundant. NXCESUV is suited for gaseous fuel application, where UV energy is abundant. NXCESDC is suited for application where the flame detection is performed using Fireye intelligent scanner like the InSight or Phoenix flame scanner. Installation of the plug-in amplifier card is necessary for the NXF4000 to operate normally.

DESCRIPTION

The amplifier card provides a single flame sensing channel for UV, IR, or DC. The amplifier card is designed for field installation. Avoid touching the S1/S2 terminals of the amplifier card or control as it could carry high voltage (UV: 300VDC).

> **NOTICE: Please refer to technical manual NXF-4001 for amplifier/FSG operating instructions.**
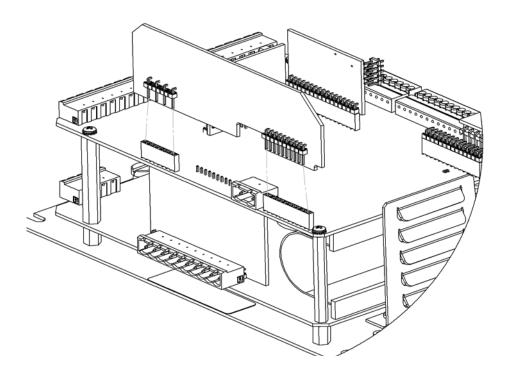
BEFORE INSTALLING THE AMPLIFIER CARD

> ⚠ **CAUTION:** Ensure that electric power is turned off. Be aware that power to some interlocks (operating controls, air flow switches, modulating circuits, etc.) may be derived from sources other than what is controlling the NXF4000. Be sure to discharge electrostatic charge by making contact with a grounded surface.

1. Remove all plug-in terminal blocks from NXF4000.

    • Do not pull on terminal blocks by the connected wires. With a flat tip screw driver, simply pry each terminal block away from its mating connector. When prying out terminal blocks do not use excessive force.

2. Loosen the 3 cover mounting screws. The screws are held in place in the cover by retainers.

3. Remove the cover by lifting the cover away from the NXF4000.

4. Locate the FSG plug-in card assembly connector on the right hand portion of the NXF4000.

Cover Retaining Screws

5. Be sure to discharge electrostatic charge by making contact with a grounded surface.

6. Grasp the FSG board such that the connector on the FSG board is facing to the left.

   • Be sure to line up connector pins properly. Use alignment pins on motherboard as a guide.

7. Insert FSG board into connector on NXF4000 until firmly seated.

8. Re-install cover over NXF4000 until screws are contacted against standoffs.

9. Tighten screws to secure cover to chassis.

10. Re-insert all terminal blocks until fully seated.

11. Apply power.

12. From the INFO screen use the UP/DOWN arrows and find firmware revision information. The FSG firmware should be shown as a non-zero number.

Wiring Information

The FSG plug-in card's S1 & S2 signals are connected to terminal block P10 on the NXF4000. Connector P10 is a 2-position single row terminal block in the upper right-hand side of the control. For scanner connection, use appropriate cable with drain wire terminated to the grounding lug of the NXF4000.

⚠ **NOTICE:** Due to the possibility of high frequency electrical noise, it may be necessary to ground the shield at both ends. Verify the equipment bonding (GREEN) wire is connected

Scanner Information

	NXCESUV	NXCESIR	NXCESDC
Scanner Type	UV	IR	Integrated
Compatible Scanner	UV1AL-3, UV1AL-6, UV5-1, UV90L-1	48PT2-1003, 48PT2-1007, 48PT2-9003, 48PT2-9007	85UVF4-1QDWR, 85IRF4 -1QDWR, 95DSS2-1, 95Dss3-1WINC
S1/S2 (nominal)	+300VDC	+5V	+24V