	<p><b>CAUTION</b></p> <p><b>ELECTRICAL HAZARD</b></p> <p>Disconnect electrical power when making any internal adjustments or repairs. Servicing should be performed by qualified Simplex Representatives.</p>
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## Introduction

This publication shows how to install the 4005-9813 Expansion Power Supply (Part No. 565-481) and the 4005-9807 Power Distribution Board (Part No. 566-252) into the 4005 Fire Alarm. Refer to the label on the inside of the 4005 panel door for the location of each board.

## Expansion Power Supply (See Figure 1)

The 4005 Expansion Power Supply provides up to 5 Amps of regulated alarm power and mounts in the left side of the 4005 back box. This supply is intended for use with the main 4005 Power Supply (Part No. 565-479) and is not intended as a standalone power supply.

### Setup

#### Jumper Settings

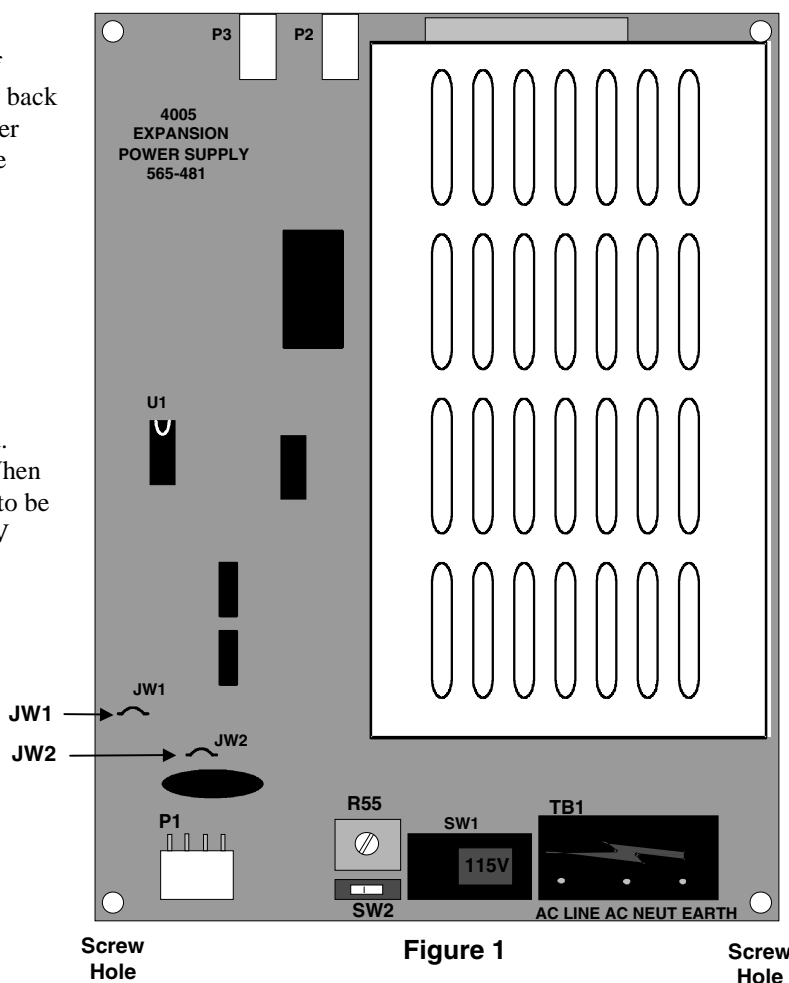
##### JW1 - Low Battery Cutout

With this jumper installed, the Low Battery Cutout is enabled. When the jumper is removed (cut), the feature is disabled. When enabled, the Low Battery Cutout causes the signal power tap to be turned off (tripped) when the battery voltage drops below 18V (while the system is running on batteries).

##### JW2 - Power Module Supervisory Input (PMSI)

With this jumper installed, the PMSI is ignored by the system and a trouble *cannot* be initiated on the PMSI line. When the jumper is removed (cut), the PMSI feature is enabled. When enabled, an open circuit on this input will cause a trouble; the input must be pulled low (24C or 0V) to clear the trouble.

**Note:** All general trouble conditions are reported to the main power supply. The main power supply then communicates the information to the CPU.



## Switch Settings

### SW1 - Voltage Select Switch

SW1 determines the desired line voltage range. When the “115V” label shows on the switch, the power supply is set for its low range (88V-132V). When the “230V” label shows on the switch, the power supply is set for its high input range (187V-264V).

**CAUTION: Ensure that SW1 is set to the proper voltage range before applying power.**

### SW2 - Brownout Range Switch

Set SW2 to its default (ON) position (as indicated by the silk-screen) for nominal operation in the low-input range (120V or 220V). Set SW2 to its OFF position for high-input range (240V) operation.

## Installation

Follow Steps 1 through 4 to install the Expansion Power Supply board.

1. Using the screws provided, install the plastic chassis channels into the left-hand side of the back box.
2. Position the white insulation sheet (supplied) in the left side of the back box.
3. Slide the Expansion Power Supply board into the chassis channels while keeping the insulation in position behind the board.
4. Using the screws provided, tighten the Expansion Power Supply board to the chassis through the two bottom holes indicated in Figure 1.

**Note:** Refer to Pub. No. FA4-41-653 to configure the Expansion Power Supply once it's installed in the 4005.

## Connections

### TB1 Connections

This terminal block is for AC input connections. Contractor wiring is connected to TB1 of the expansion power supply from TB2 of the main power supply as follows:

Main Power Supply Connection	Description	Expansion Power Supply Connection
TB2-1	AC Line	TB1-1
TB2-2	AC Neutral	TB1-2
TB2-3	Earth Ground	TB1-3

### P1 - Expansion Supply System Connector

This 8-position connector is used to connect the expansion power supply to the main power supply. This connection commons the two supplies, provides battery distribution, and feeds the expansion supply's supervision signal to the main power supply.

Using the supplied 8-wire cable (Part No. 733-882), connect P1 of the expansion power supply to P2 of the main power supply.

**Note:** Power supply wiring is shown on the label inside the 4005 panel door.

## Power Distribution Board (See Figure 2)

The Power Distribution Board is essentially a backplane for the I/O cards. In addition to bussing data and control signals between the CPU and I/O cards, the power distribution board provides signal power from the power supply to the Output boards and 24VDC auxiliary power to TB1.

The power distribution board has two possible installation locations in the 4005 Back Box. The base 4005 comes with a power distribution board mounted in the right side of the back box. The second (optional) power distribution board is mounted in the left side of the back box.

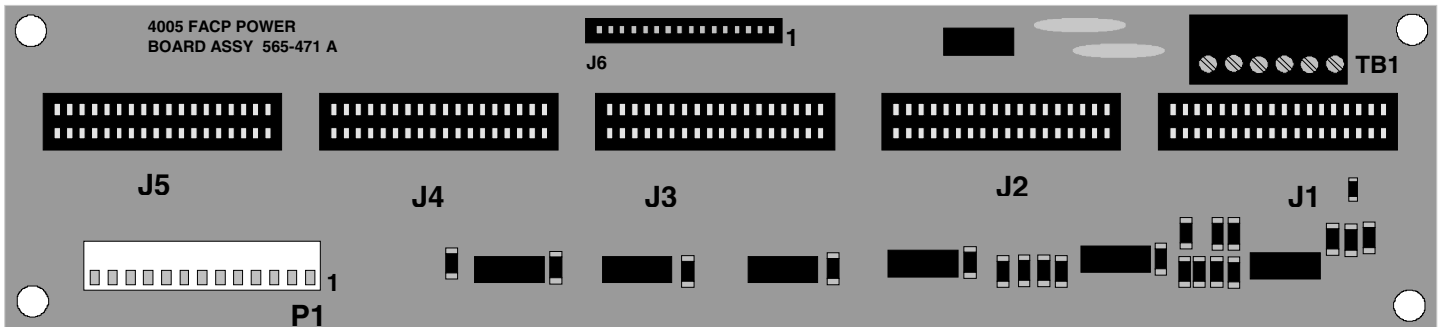


Figure 2

## Installation

To install a Power Distribution Board, use the standoffs provided to mount the board to the chassis with all board connectors facing away from the CPU.

**Note:** When installing the second power distribution board, install the board on the left side of the back box so that P1 is at the top of the back box.

## Connections

### P1 - Power Supply Connection

This 13-pin post header (P1) of the distribution board connects to the main power supply's main output connector (P1).

When only the main power supply is used, connect the two-wire, three-position cable (Part No. 733-883) from P3 of the main power supply to P1-11, -12, & -13 of the power distribution board. When an expansion power supply is installed, connect the 733-883 cable from P2 of the expansion power supply to P1-11, -12, & -13 of the power distribution board.

**Note:** The black wire on the 733-883 cable connects to P1-13 and the white wire connects to P1-11 of the optional power distribution board. The P3 connector on the main power supply and P2 connector on the expansion power supply are keyed for proper connection

### J6 - CPU Connector

A 16-pin ribbon cable from the CPU (P4) connects to the J6 connector of the power distribution board.

Connect J6 on the optional distribution board to J3 of the CPU board with the supplied 16-pin ribbon cable (Part No. 166-438).

## TB1 - Field Wiring Block

This terminal block provides a point for field wiring of power-limited 24V auxiliary and annunciator power as well as a system common point. The wire terminations are shown below.

- TB1-1 - System Common
- TB1-2 - System Common
- TB1-3 - 0V
- TB1-4 - 0V
- TB1-5 - AUX\_B (+24VDC)
- TB1-6 - AUX\_A (+24VDC)