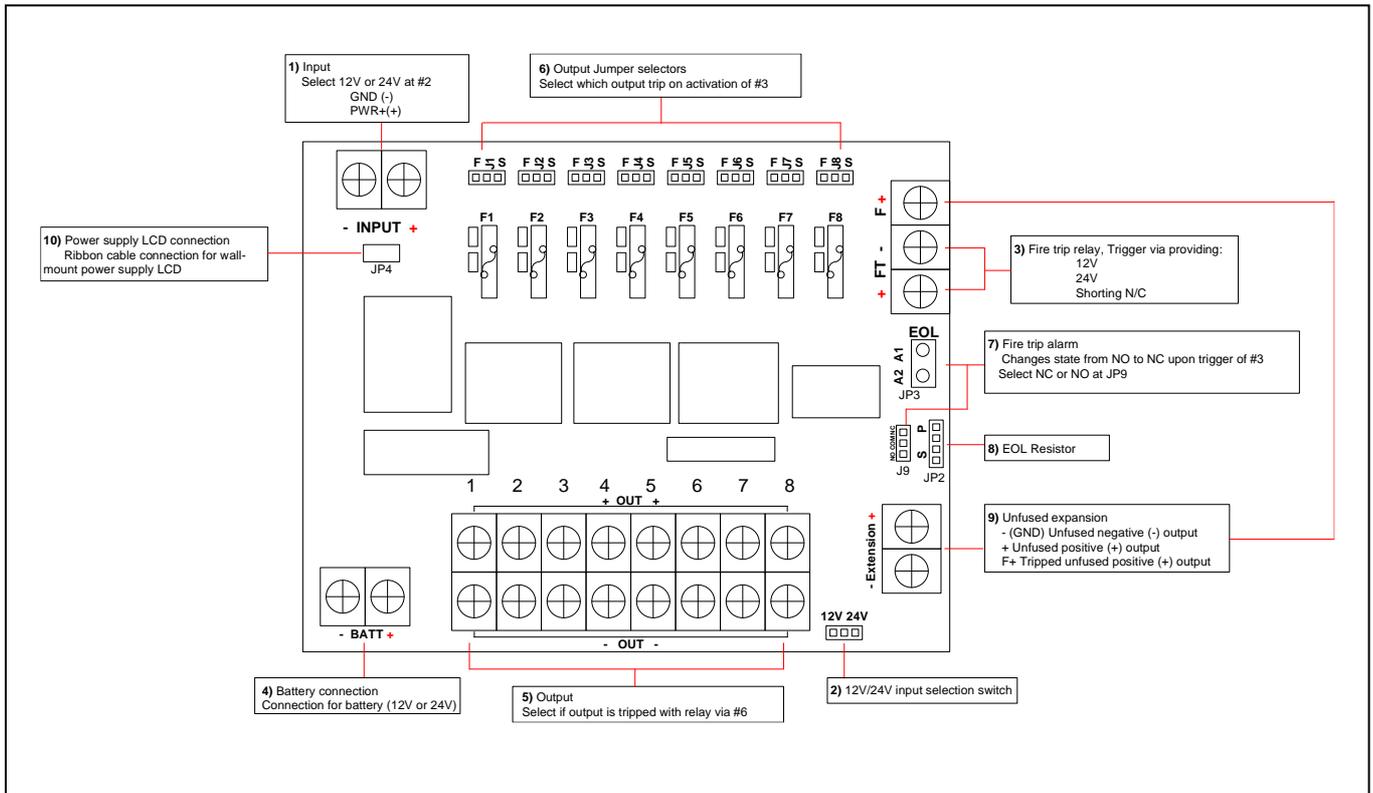# Patriot Fuse
Installation Manual
Rev. 3.1

Fused power distribution module for access control with integral fire trip relay and optional battery back-up.

1. INPUT

Connect 12 or 24V input into the Patriot Fuse via the terminals:

GND (-)

PWR + (+)

2. 12 OR 24V SELECTOR SWITCH

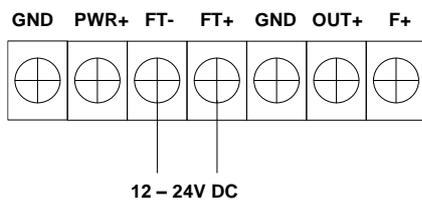Select the input voltage via the selector switch.

Note: if you are connecting a battery/ies to the system, input voltage should be set as follows:
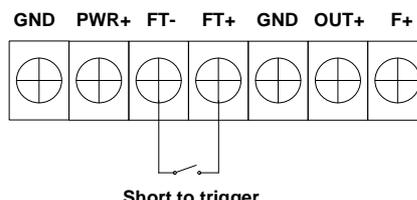
  12V- set to 13.5V DC

  24V -set to 27V DC

3. FIRE TRIP RELAY

Trigger the relay by providing 12V - 24V or shorting to closed

position. *Standard operation is N/O*

4. BATTERY CONNECTIONS (option)

Batteries can be connected to the Patriot fuse for back-up during a power failure. Various sized batteries can be used to achieve up to 4 hours back-up time.

12 or 24V can be used for battery back-up by selecting the preferred voltage (#1 & #2).

5. OUTPUTS

The eight power outputs are each individually protected by a 2A self-healing fuse that will activate from a current greater than the fuse rating.

Each output has LED next to the fuse. LED will be active when the output has power.

To select if one of the 8 outputs are affected by the fire trip relay 'Fire Power' (#3), select this via the output jumper selectors (#6)

6. OUTPUT JUMPER SELECTORS

The jumpers determine what occurs with the outputs when the FIRE TRIP INPUT (#3) is triggered as follows:

| Jumper position	Fire Trip Input Triggered	Fire Trip input not triggered
F and J	Output power present	No output
J and S	Output power present	Output power present

7. FIRE TRIP ALARM

This terminal allows monitoring of the fire trip relay status via N/O or N/C connection.

Use JP 9 to change state from N/O to N/C.

This # can also be used if connecting to a secondary patriot Fuse to activate its fire trip relay (#3)

8. END OF LINE RESISTORS

By installing EOL resistors into the sockets marked SP, the terminals A1 – A2 (#7) provide a direct interface to a security panel input without the need to join or solder resistors.

Different EOL Resistors   Same EOL Resistors   Single EOL Resistors
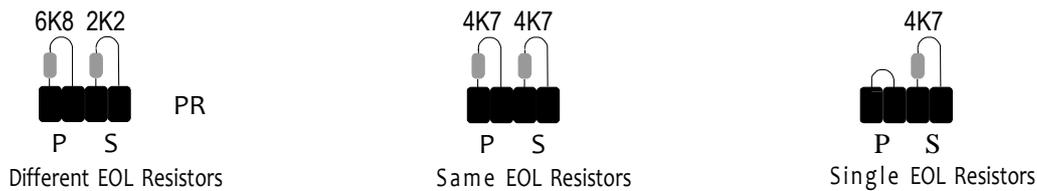
9. UNFUSED EXPANSION

Board can be extended using unfused expansion if total current draw does not exceed PCB (10A) or fire relay (8A) limit.

If current draw exceeds limitations an additional Patriot Fuse module can be used.

GND – (-) negative common connection on unfused expansion

OUT+ (+) positive un-tripped connection on unfused expansion (not affected by relay #3)

*F+ (+) positive tripped connection on unfused expansion (affected by relay #3)*

To activate the fire trip on an expanded/second patriot fuse use #7.

10. POWER SUPPLY LCD CONNECTION

JP4, ribbon cable connection for patriot power supplies wall-mount power supplies LCD connection.

Seamless installation of Patriot fuse into Patriot Wall-mount power supply

1. Remove the existing distribution board and install Patriot Fuse in its place.
2. Connect input cable to input on patriot fuse. (#1 on diagram below)
3. Connect LCD ribbon cable to patriot fuse JP4 (#2 on diagram below)
4. If you are adding a battery connect to battery terminal on Patriot fuse (#3 on diagram below) – Battery and cables not included, these can be purchased separately.

Pat Fuse installed into W-DC24

Pat Fuse installed into W-DC12
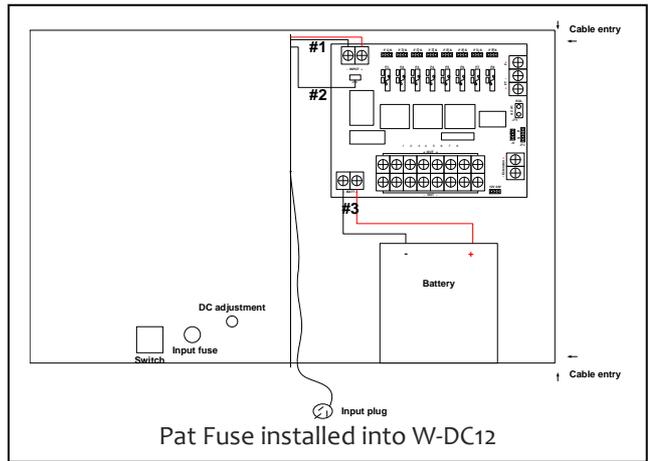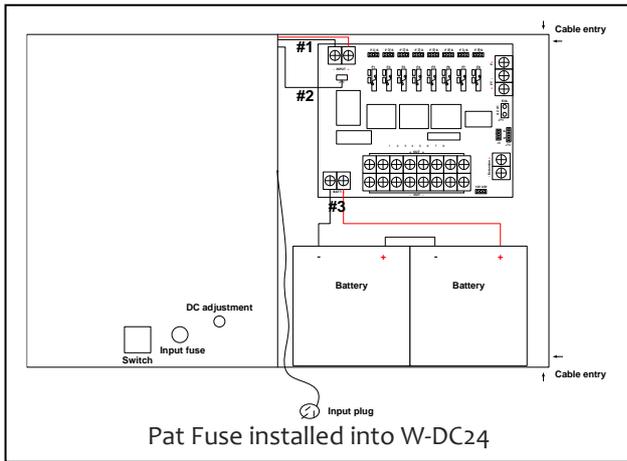
Connecting 2 Patriot Fuses

Connecting 2 patriot fuses can be done in many ways but the most common way is as below:

Connect the input to both inputs on the patriot fuses selecting the correct DC voltage. Use the Fire Trip alarm (#7) from the first Patriot fuse to the Fire Trip Relay on the second (#3). As per the diagram below.