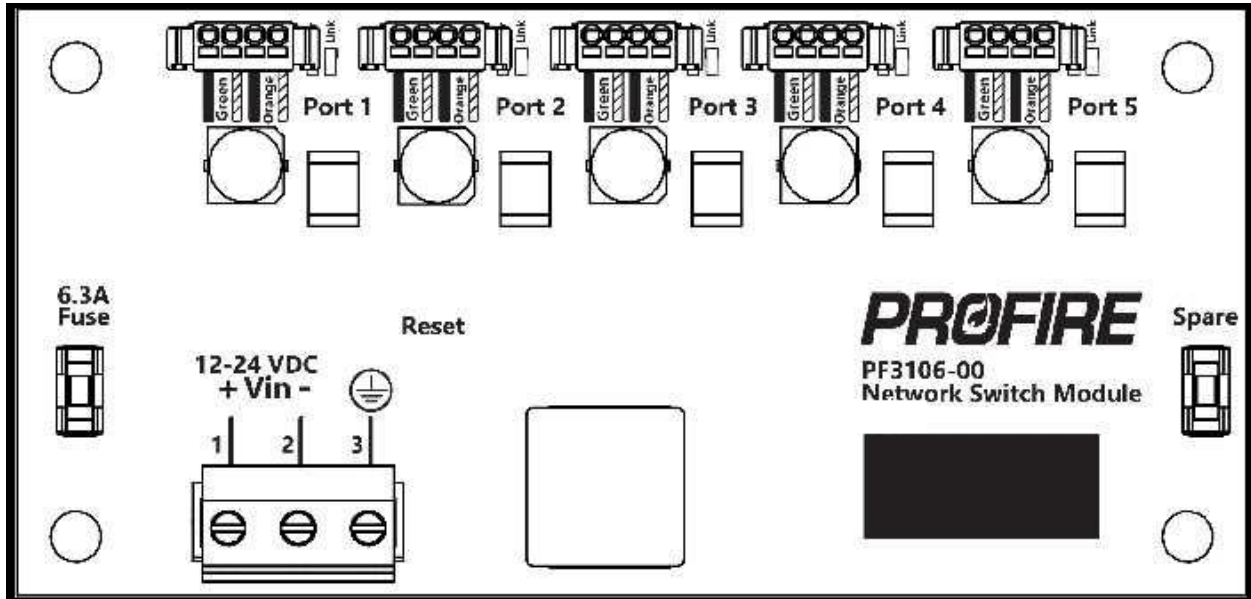


PROFIRE PF3100 Network Expansion Card

PF3106-00



The PROFIRE PF3100 Network Expansion Card provides additional ports for extra modules, routes network traffic, and provides power to the connected network nodes.

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1. Introduction

Functional Description

The PROFIRE PF3100 Network Expansion Card acts as a network switch. This card provides additional ports for extra modules, helps route network traffic, and provides power to the network.

Model Types

Model Number	Name	Description
PF3106-00A	Network Switch Module	5-port Network Switch standalone - polyester painted steel enclosure.

2. Certifications

PROFIRE strives to ensure that certifications are updated as quickly as they become available for all of our products.

Network Expansion Card – Hazardous Location Rating

Certification: Class I, DIV 2, GRP A, B, C, D; T4.
CSA 22.2 No. 60730-2-5, UL 60730-2-5.

The board includes the following symbols:



Caution: possibility of electric shock.



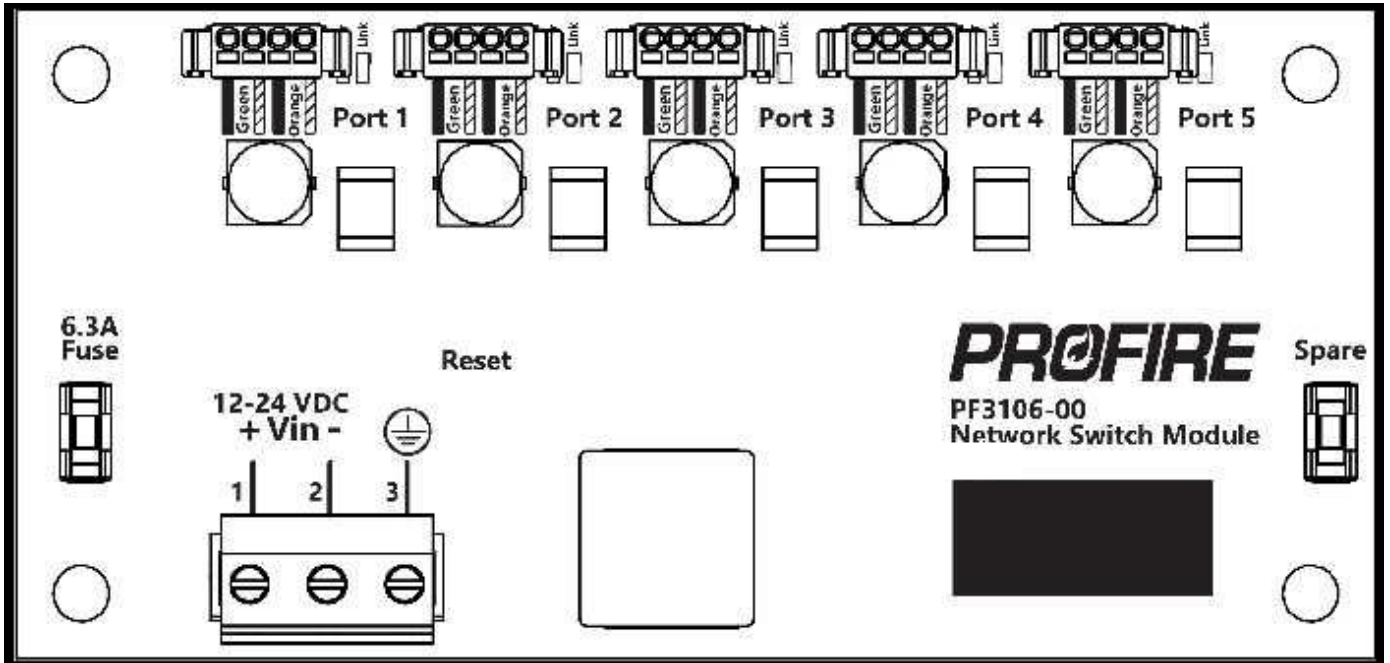
Caution: documentation must be consulted in all cases where this symbol is marked.

3. Card Information

Card Specifications

The ambient temperature rating for the Network Expansion Card is -40°C (-40°F) to +60°C (+140°F).

Card Diagram



Terminal Specifications

Terminal		I/O	Safety Rated	Description	Electrical Ratings	
Name	No.				Voltage	Current
Power 12-24 VDC Vin +	1	I	N/A	12/24 VDC Power Input	12-24 VDC	6.3A Max
Common 12-24 VDC Vin -	2	GND	N/A	Ground back to DC source	12-24 VDC	6.3A Max
EGND	3	GND	N/A	Earth ground and enclosure ground	N/A	N/A
Port Name	Port Number	I/O	Safety Rated	Description	Electrical Ratings	
					Voltage	Current
Port 1	1	I/O	N/A	The PFRN IO connect ports are used for IO modules to communicate with the BMS card.	36 VDC	1A Max
Port 2	2	I/O	N/A	The PFRN IO connect ports are used for IO modules to communicate with the BMS card.	36 VDC	1A Max
Port 3	3	I/O	N/A	The PFRN IO connect ports are used for IO modules to communicate with the BMS card.	36 VDC	1A Max
Port 4	4	I/O	N/A	The PFRN IO connect ports are used for IO modules to communicate with the BMS card.	36 VDC	1A Max
Port 5	5	I/O	N/A	The PFRN IO connect ports are used for IO modules to communicate with the BMS card.	36 VDC	1A Max

Terminal Descriptions

Power, Common

12/24 VDC Power Input. Common ground back to DC source.

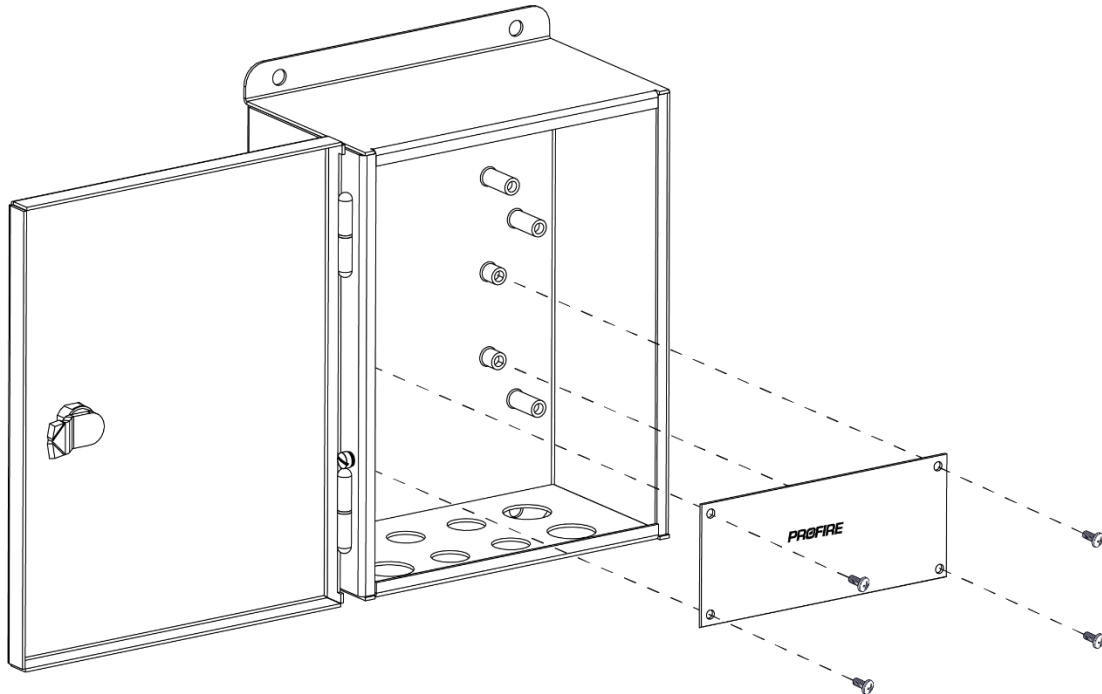
EGND

Earth ground and enclosure ground.

4. Mounting Instructions

Mounting the Card in the Enclosure

1. Install four (4) #10-32 screws through the UV Pilot card (as indicated in the image below) and attach them to the upper set of enclosure stand-offs. Please note the board orientation.
2. Torque to 26 in*lb.



5. Enclosure Specifications

The Network card can be mounted in a fire-proof enclosure that is safe for the area of operation (e.g. – hazardous/non-hazardous.) The UIX, CTX, and AUX enclosures described below are examples:

Specifications	Enclosure Type		
	UIX	CTX	AUX
Dimensions	Height 30.9cm (12.15 inches) Width 23.4cm (9.23 inches) Depth 13.4cm (5.28 inches)	Height 30.9cm (12.15 inches) Width 23.4cm (9.23 inches) Depth 13.4cm (5.28 inches)	Height 30.9cm (12.15 inches) Width 23.4cm (9.23 inches) Depth 13.4cm (5.28 inches)
Hazloc Rating	Class I Div 2, IP66	Class I Div 2, IP66	Class I Div 2, IP66
Mounting	Channel Bar or Direct Mount	Channel Bar or Direct Mount	Channel Bar or Direct Mount
Enclosure Construction	Poly Painted Steel	Poly Painted Steel	Poly Painted Steel
Operating Temperature	-40°C (-40°F) to 60°C (140°F)	-40°C (-40°F) to 60°C (140°F)	-40°C (-40°F) to 60°C (140°F)
Storage Temperature	-40°C (-40°F) to 60°C (140°F)	-40°C (-40°F) to 60°C (140°F)	-40°C (-40°F) to 60°C (140°F)

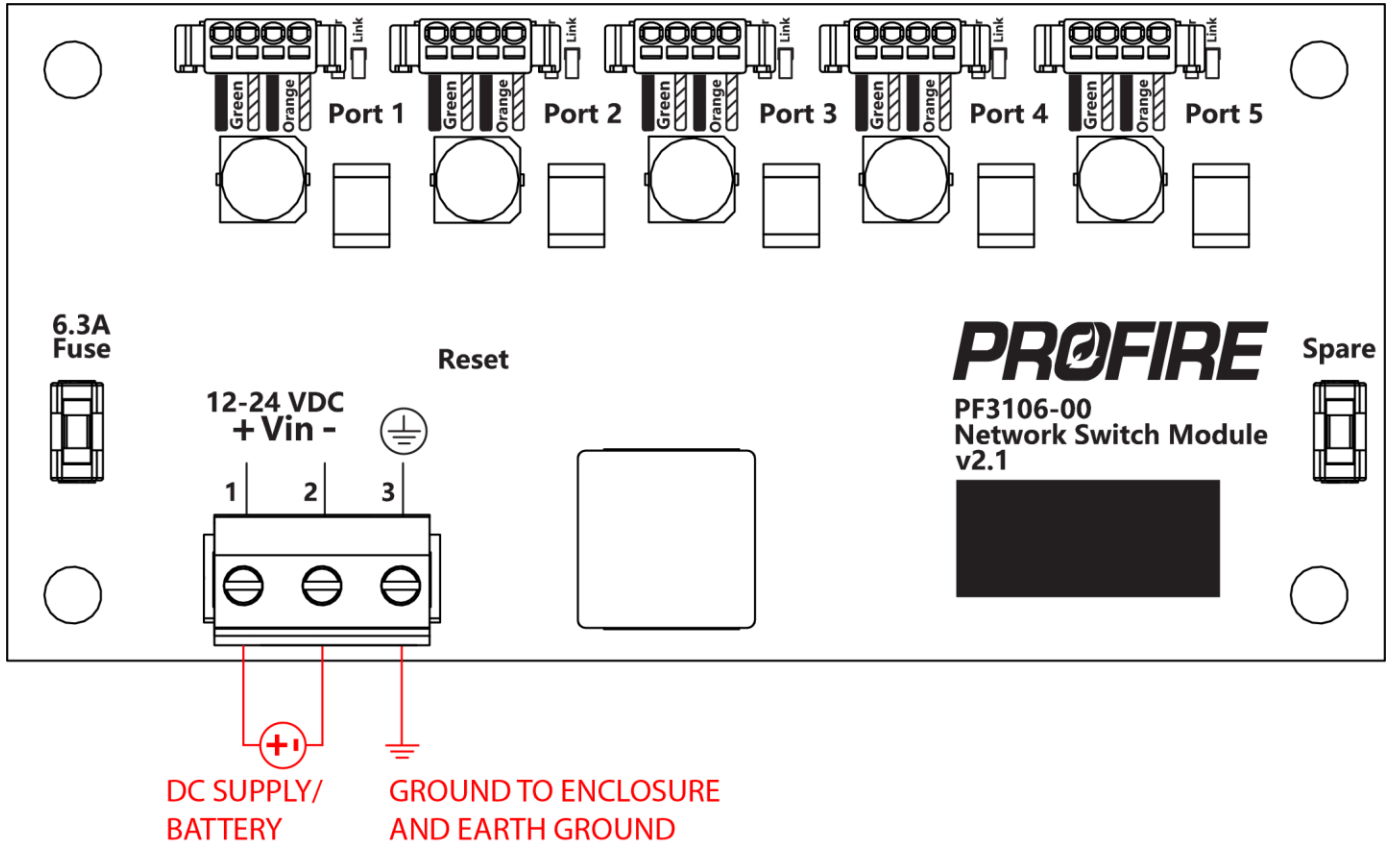
6. Instructions for Use

The Network card is used to help route network traffic and provides power to the network.

Operation

Operating controls and their uses are described in the “Terminal Descriptions” section.

7. Wiring Diagram



Wiring Specifications

12-30 AWG can be used for all connections. External fuses must be installed according to the local electrical code. Wire gauge size must also be selected in accordance with local electrical codes.

8. Preventative Maintenance & Inspection

In order to ensure that the Network Expansion card works correctly and efficiently, the following maintenance and inspection procedures should be followed:

- Ensure that all wires are connected correctly.
- Minimize copper wire exposure.
- Check for corrosion and ensure that no wires are frayed or worn, and all insulation is intact.
- Confirm no moisture or condensation is apparent on the board or in the enclosure.
- Ensure that the board does not show any sign of mechanical damage (e.g. – damage from an impact such as dropping an item).
- Ensure that the board does not show any sign of electrical damage (components should not be burnt or damaged in any way).
- Confirm that the temperature of the board is within ambient temperature operating limits.
- Check that the enclosure is secured and that the device is not subject to excessive vibration.
- Routine inspections of all equipment should be performed. If any abnormality is found, corrective actions should be taken. If the abnormality cannot be corrected, contact PROFIRE.
- A qualified technician should perform any tests necessary to confirm that the equipment is still in a safe condition.

Cleaning

If the card becomes dirty it can be cleaned with compressed air. Do NOT use solvents, cleaners, or liquids to clean the board. Caution must be exercised when cleaning the board in order to prevent damage from ESD (electrostatic discharge).

Replacement Parts

Please contact PROFIRE should any replacement parts be required.

9. Important Safety Information

Before installing the PF3100 Network Expansion Card, please review the list of warnings below. Product use in a manner not specified by PROFIRE is not recommended. Failure to observe the following warnings may result in death, electrocution, property damage, product damage, government fines, or malfunction of the product itself.

WARNING: Explosion Hazard

- Do not disconnect while circuit is live unless area is known to be non-hazardous or equivalent.
- Substitution of components may impair suitability for specified zones.
- Do not service unless the area is known to be non-hazardous.
- Do not open when energized.
- Installation and use must conform to the directions in this guide.
- System must be properly connected to earth-ground.

Installation Warnings

- Ensure that the PF3100 enclosures are securely closed each time after opening the enclosure. This protects the internal circuitry from moisture damage and other environmental concerns. Moisture damage is not covered by the product warranty.
- Do not connect wires or handle the device when powered.
- Properly fuse the board according to local codes.
- Do not disassemble or modify the board in any way. The board is not field repairable and must be sent back to PROFIRE for replacement if damaged.

10. PROFIRE Contact Information

If you have any concerns or questions about this product, please contact PROFIRE as follows:

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