



## Power Port 8FR – V4 Installation Notes

Fused power distribution module for access control with integral fire trip relay.

- 1) Mounting
- 2) Termination
- 3) Jumper Settings
  - 4.1) Fire Trip Interface
  - 4.2) Relay Selection
  - 4.3) Alarm Contacts/Fire Trip Monitoring
- 5) Expansion Options
  - 5.1) Additional Outputs
  - 5.2) Additional Modules
  - 5.3) Other Fire Equipment
- 6) Fuse Selection and Replacement
- 7) Technical Data and Ratings

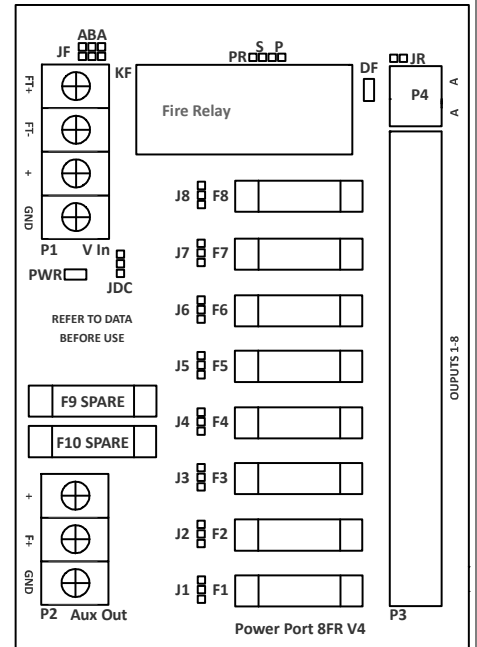


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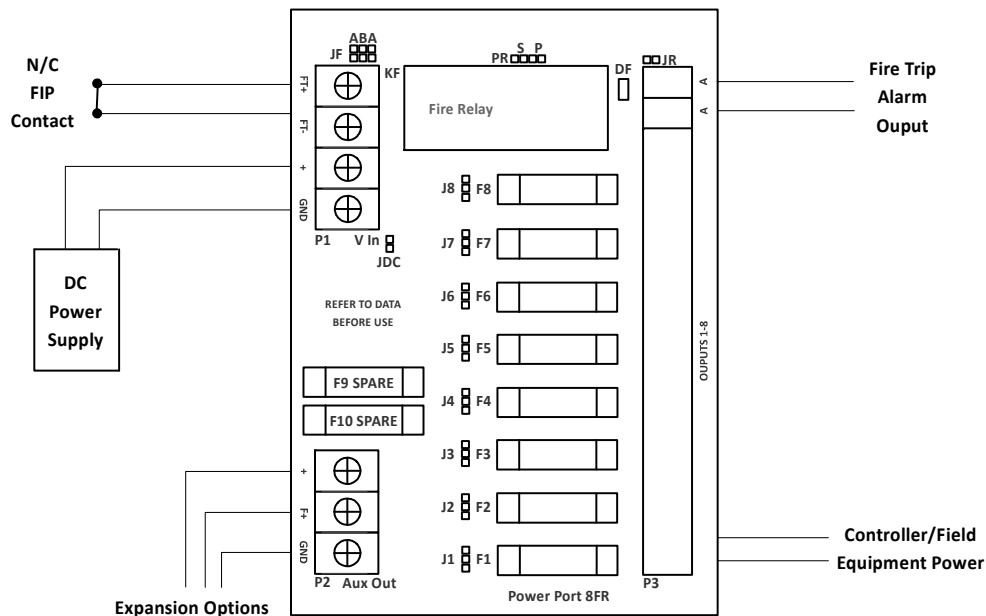
Before powering the PP8FR you must take the time to read and understand all installation notes.

### 1) Mounting

The PP8FR is fitted with two DIN rail mounting clips that suit most popular top hat and G profile rails. For low profile enclosures the PP8FR V4 is also suitable for the popular “Snap Track” mounting method. (TE Connectivity part number 4TK2)

### 2) Termination

The most common termination method is illustrated below; other options are outlined elsewhere in these notes.



The maximum diameter of cable for each terminal is outlined in section seven *Technical Data*. Fire trip interface relay and alarm setup is outlined in section four *Fire Relay Options*. For *Expansion Options* see section five.

### 3) Jumper Settings

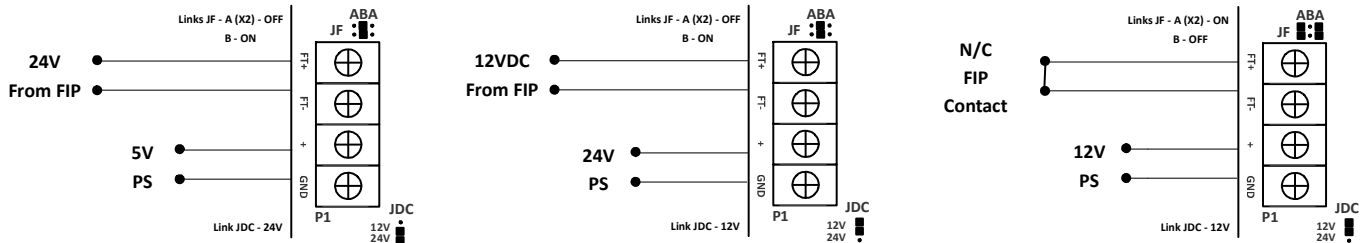
**Warning: It is important to correctly set and check JF and JDC before applying fire trip or power to the PP8FR module. Incorrect jumper settings may cause damage to the module and other equipment.**

Jumper/Link	Position	Description
J1-J8	S	Associated output connected to standard supply power
	F	Associated output connected to supply power via fire relay
	Off	No power available to associated output
JR	C	Terminal A – A provides N/C fire relay contact
	R	Terminal A – A provides fire relay status monitoring via EOL resistors
JF	A (X 2)	Fire trip interface N/C contact in fire panel
	B	Fire trip interface DC voltage from fire panel
	Off	No power available to associated output
JDC	12V	12VDC Fire trip input (or 12V supply input for N/C trips)
	24V	24VDC Fire trip input (or 24V supply input for N/C trips)

### 4) Fire Relay Options

#### 4.1) Fire Trip Interface

The on board fire relay is designed to provide a failsafe method of fire trip interface. There are two options for connection to the FIP. (Fire Indication Panel) Either an N/C (Normally Closed) voltage free contact can be used or the FIP or other device can supply a DC voltage. Both options are terminated directly to the FT+ and FT- terminals and links set to match (see section 3). Correct polarity must be observed when using a DC voltage. Examples below.

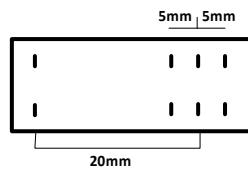


If an N/C fire trip is used care must be taken to set JDC to the value of the power supply input as this will be used to activate the fire relay.

#### 4.2) Relay Selection

Relay selection for the PP8FR V4 is greatly simplified compared to previous versions. A 12VDC relay is supplied and on board settings allows a 12 or 24VDC fire trip to be used. (See section 3 and 4.1)

A simple plug in relay is used and can be replaced easily. A 12VDC relay with minimum 8A rated contacts is recommended.



Relay pin layout viewed from below.

The relay socket accepts a plug in industrial power relay with a 5mm contact pin pitch. There are many suitable relays including but not limited to: Finder 40/44 series, Song Chuan 845 series and Tyco/Schrack RTE Series

#### 4.3) Alarm Contacts/Fire Trip Monitoring

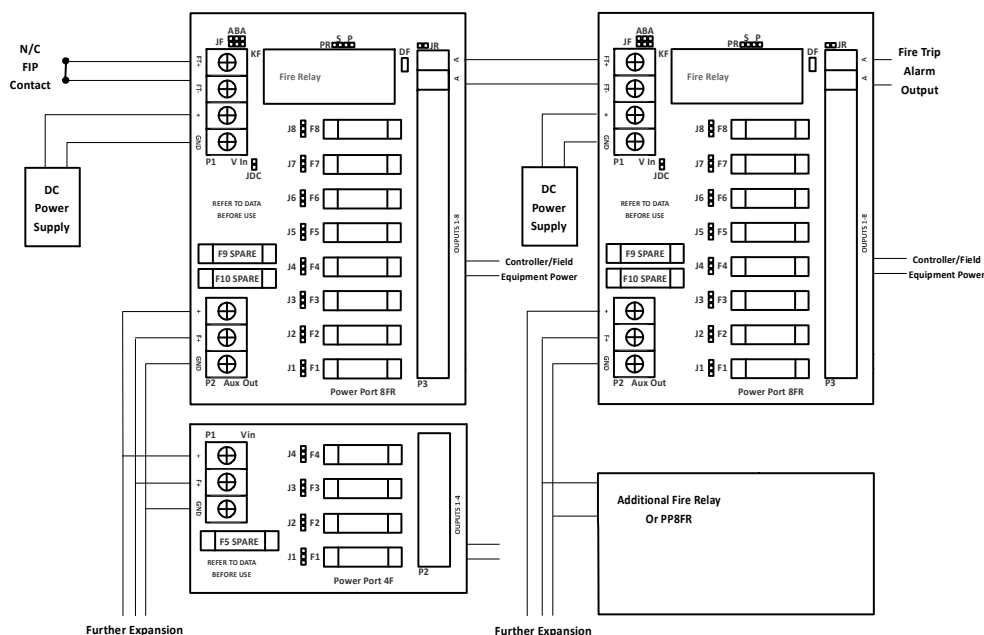
The terminals marked A - A are interfaced to the secondary contact of the fire relay. By setting *JR* to on, the terminals A – A provide an N/C contact for expansion or alarm monitoring (Maximum 2A)

By removing *JR* and installing EOL (End Of Line) resistors into the sockets marked *PR*, the terminals A – A provide a direct interface to a security panel input without the need to join or solder resistors. Resistor leads should be bent and trimmed to 6-8mm below resistor base. EOL resistors should be inserted before the fire relay is installed. See examples in diagram below. (P = Parallel EOL resistor, S = Series EOL resistor)



## 5) Expansion Options

Examples of several expansion options are outlined in the diagram below.



### 5.1) Additional Outputs

Additional fused power outputs can be added using the expansion board PP4F. One or more boards can be added as long as the total current drawn does not exceed PCB (10A) or fire relay (8A) limits.

If current draw exceeds limitations an additional PP8FR module can be used.

### 5.2) Additional Modules

The N/C auxiliary fire relay output (A – A) can be used to provide the fire trip for an additional PP8FR module. This allows expansion either locally or remotely to elsewhere in a building.

The fire trip for extra PP8FR modules can also be powered from the fire power output expansion terminals (*P2*) or from a fused output (*P3*)

### 5.3) Other Fire Equipment

Often there will be other equipment requiring a fire trip. Devices such as BMS components, auto doors, lifts and legacy security fire equipment can be given a fire trip interface either from the auxiliary fire relay output (A – A), from the expansion output or from a fused output.

## 6) Fuse Selection & Replacement

M205 fuses are used for each output. Two spare fuse holders are available on board. The constant current drawn from an output must not exceed 2.5A however up to a 3A fuse may be used as the PP8FR can accept slightly higher output current for a very short time. Fuses must be selected to match field device, power supply and cable specifications.

A blown fuse is identified by the LED indicator turning off. Remove the blown fuse by gently levering out the fuse with a flat blade terminal screwdriver or fuse puller placed under the centre of the fuse, then clip in a replacement fuse of the same type and rating.

## 7) Technical Data

Input voltage range	0-30V DC
Fire relay coil voltage	12-24VDC
Max standard power current	8A
Max fire power current	8A (with supplied relay)*
Max current per output	2.5A
Max alarm contact current	2A
Fused outputs	8
Fuse type	M205 2A NB
Mounting	DIN rail mounts supplied. (see section 1)
On board spare fuse holders	2
Dimensions (with relay and mounting clips)	110 L X 75 W X 50 H (mm)
Mounting holes	8 X 3.5mm (to suit M3 screws and bolts)

\*Peak current only – resistive load. A 20% load current margin is recommended for fire power current (6.4A). Many devices including electric locks have a higher current on start up and at other times; this must be accounted for in the peak current. Current ratings are valid for operating temperatures up to 24 degrees C with a fire trip of 12VDC. Factors such as lock types, external heat and higher fire trip voltages must be taken into account when designing power loads.

## Connections

Terminal	Description	Max Conductor Size
(P1) FT - FT+	Fire panel trip interface	2mm <sup>2</sup>
(P1) GND & +	DC power supply input	2mm <sup>2</sup>
(P2)	Expansion output	2mm <sup>2</sup>
(P3) 1 - 8	Fused outputs	1.5mm <sup>2</sup>
(P4) A - A	Monitoring output	1.5mm <sup>2</sup>
(PR)	EOL resistor sockets	1/4 -1/2 Watt resistors (X2)

## LED Indicators

LED Designator	Description
D1-8	Fuse status, on indicates fuse intact and power is available.
DF	Fire relay status, on indicates relay is active and fire power is available.
PWR	Power is available from the power supply.

## More Information

For complete install notes, data sheets and technical support please visit [www.jackfuse.com](http://www.jackfuse.com)

