Power Control Module
Model 08872
Model 08873

Rev 2.4

Model FP-08872

Model FP-08873

Contents

1 Introduction

1.1 General Information

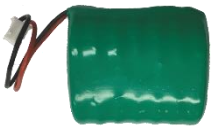
The FP-08872 or FP-08873 Power Control Module provides a plug-in, supplementary power supply to be installed in conjunction with the FP-08450 or FP-08451 Fire Control Panel. The Power Control Module provides continuous power to the FirePro fire control panel, for a period of 24 hours (as per AS5062), in the event the main power supply fails.

The Power Control Module operates when both a Main Power supply and the internal backup battery are connected. Should the main supply fail or drop below operating volatage, the module automatically switches the power supply to the internal batteries.

1.2 AS5062 Vehicle and Mobile Plant Installations

Where a vehicle does not have two separate power supplies capable of operating the fire control panel for 24 hours, a FP-08872/73 must be installed to be compliant.

2 Components List

	**FP-08872 Power Control Module** Power Control Module, 12 - 24vDC, NiMh, two side entry	1x DP-2200	Deutsch Plug 2 Pin Male/Female, c/w heatshrink
	**FP-08873 Power Control Module** Power Control Module, 12 - 24vDC, NiMh, one side entry	1x DP-2200	Deutsch Plug 2 Pin Male/Female, c/w heatshrink
	**FP-18157 Replacement Backup Battery** 9.6vDC, 450mAh NiMH		

3 Designs Considerations

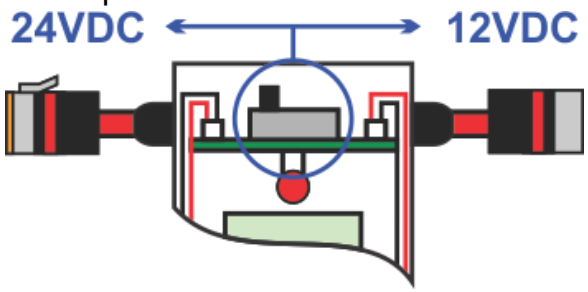
3.1 Power Supply Input

The FirePro 08872/73 Power Control Module is a multi-voltage backup power supply, able to be configured to operate on either 12-volt DC or 24-volt DC. The configuration of the Power Control Module should be based on the available power supply, as the main power supply input MUST have the same voltage as the selected operating voltage of the Power Control Module.

The main power supply should be connected directly to the vehicle battery – NOT through the vehicle's fuse block. This will ensure continuous power to the FIP and will not drain the backup batteries. The connection to the vehicle battery must be done using a FP-14016 Battery lead, with an inline fuse installed.

3.2 Selecting Operating Voltage

The FP-08872/73 Power Control Module can be configured to operate on either 12-volt DC or 24-volt DC main supply. The operating voltage is selected using the switch on the inside of the module, as shown in the picture below.



The incoming voltage must be the same as the selected battery voltage. **Note:** Selecting an incorrect voltage will cause the internal batteries to not fully charge and may cause damage to the module.

Where the slide switch has been removed the module is auto sensing the incoming voltage and does not need any further adjustment.

3.3 System Limitations

Due to the capacity of the backup batteries, the FP-08872/73 Power Control Module has limitations on the number and type of components that can be connected while still providing 24hr backup. Each installed system will be designed around these limitations, and your supplier must be consulted prior to adding any additional devices or modules to the system.

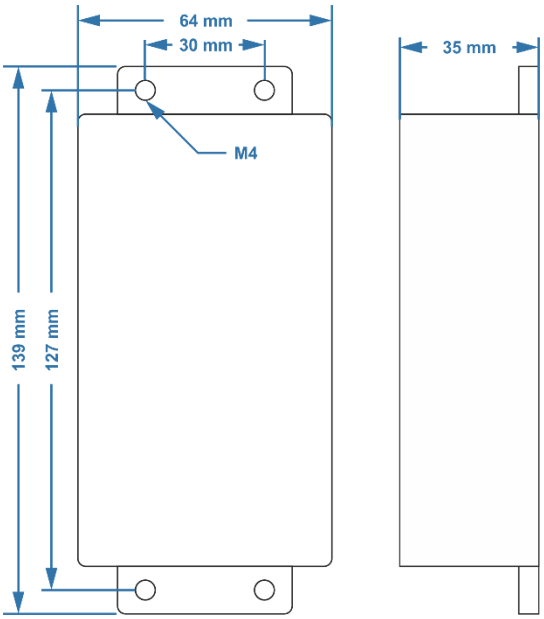
The maximum number of FirePro generators able to be discharged is limited by the voltage of the main power supply. That is:

Voltage 12vDC Max = 2 Units	**Voltage 24vDC** Max = 4 Units

3.4 Mounting

For correct installation, the Power Control Module must be mounted by four bolts or screws through the mounting holes in the flange on both sides of the Module. **No penetrations are to be made through the casing of the panel.**

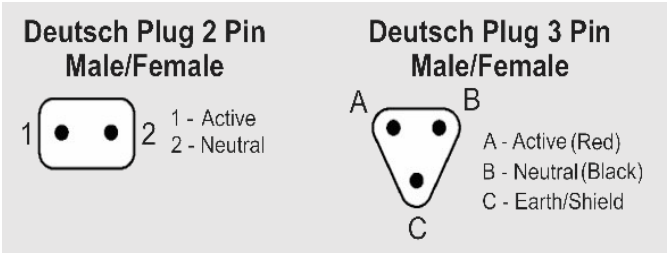
The Power Control Module enclosure is rated IP65, so should be installed in a convenient location, away from where it may be affected by large amounts of water. The module does not need to be installed adjacent to the fire control panel.



3.5 Cabling Requirements

When constructing extension leads the supplied Deutsch Plugs must be used to ensure water-proof connections are made throughout the installation.

1. Cut cable to required length and strip outer insulation to approximately 25-30mm.
2. Strip inner insulation to approximately 6mm and using a Deutsch Crimping tool, fix pins to the exposed ends of the cable, including the earth where applicable.
3. Place heat shrink over the end of the cable. Identify correct socket on plug by the numbers/letter on the side of the plug and push through the gasket at the bottom of the plug until a click is heard and the pin is locked in place.

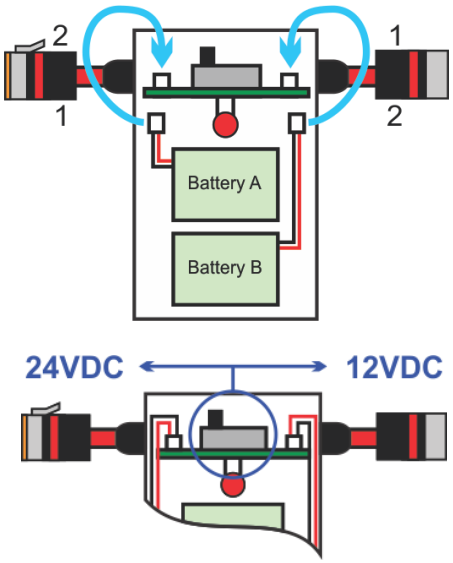


4. Place the locking mechanism inside the plug to ensure pins remain secure. (Male plugs; locking mechanism is orange. Female plugs; locking mechanism is green).
5. Using the heat shrink, seal the back of the plug.

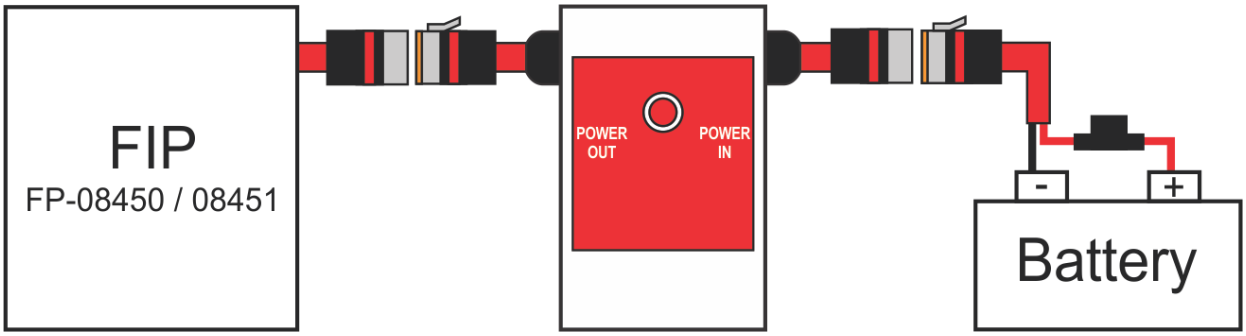
Cables are colour coded for easy identification. When installing system, cables should be only connected to the correctly coded cable. Colour Coding for cables is as follows:

Colour	Circuit
Red	Power Supply
Yellow 1	Activation
Yellow 2	Activation Delayed
Green 1	Detection 1
Green 2	Detection 2
Blue	Discharge Advice
Orange	Siren/Strobe
White	Relay Output

4 Installation

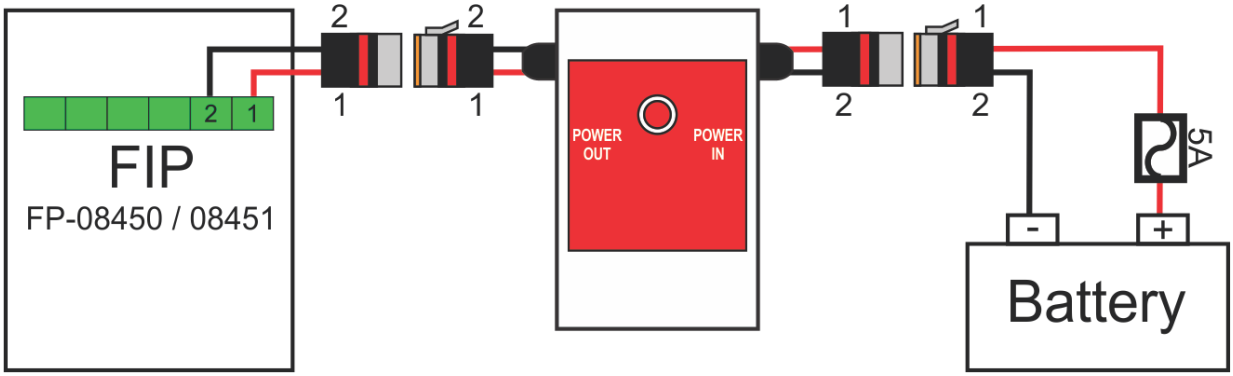


1. The output cable to the FIP should remain disconnected until all other steps are completed.
2. **When supplied, the internal batteries are disconnected.** Before connecting the main power supply, open the Power Control Module and connect both internal batteries to the power terminals.
3. Check the voltage of the available main supply, and using the internal switch select the appropriate operating voltage for the module. **Note:** Selecting an incorrect voltage will cause the internal batteries to not fully charge and may cause damage to the module.
4. With the main supply voltage selected, it is now safe to connect the main power supply.
5. Using the FP-14016 Battery Lead, connect the Power Control Module directly to the vehicle battery and plug the Battery Lead into the "Power In" Input. If the main power supply voltage is correct, the "Charging" LED indicator will illuminate and flash.
6. If the LED indicator is illuminated and flashing, the Power Control Module can be closed and the FIP power cable can be connected to the "Power Out" output, marked red.



Note: Any connections must observe polarisation as shown in wiring diagram. Incorrect connections will not provide power and may damage the module or FIP.

5 Wiring Diagram



6 Operation

The Power Control Module operates when both a Main Power supply and the internal backup battery are connected. Should the main supply fail or drop below operating volatage, the module automatically switches the power supply to the internal batteries.

When the Power Control Module has been connected the "Charging" LED will flash continuously to indicate that the main power supply is available.

7 Commissioning

Commissioning should be performed when main supply and internal batteries are connected, and fire control panel is not in an alarm/fault condition.

1. Isolate and disconnect the any installed FirePro aerosol generators. This should generate a fault on the fire control panel.
2. Connect a FirePro FP-08800 Test Module.
3. Disconnect main power supply and ensure "Charging" LED indicator turns off.
4. Power supply will automatically switch to the internal batteries.
5. Ensure fire control panel remains operational and out of fault condition.
6. Reconnect main power supply.

8 Servicing and Maintenance

Inspection and servicing of the installed fire system should occur in accordance with the relevant Australian Standards. This should include a visual inspection of the enclosure to ensure the seals are intact.

Monitoring and operation of any installed modules should be tested as outlined in 6. Commissioning.

8.1 Replacing the Internal Batteries

The internal batteries **must** be changed every 3 years or if the backup batteries show signs of wear or damage. Both internal batteries must be replaced at the same time. New and old batteries **must not** be installed together. Old batteries should be disposed of in accordance with local regulations.

To replace the internal batteries:

1. Isolate and disconnect any installed FirePro aerosol generators. This should generate a fault on the fire control panel.
2. Connect a FirePro FP-08800 Test Module.
3. Disconnect main power supply and ensure "Charging" LED indicator turns off.
4. Isolate the Power Control Module by disconnecting both the output to the control panel and the input for the main power supply.
5. Remove the four screws on the front to open the Power Control Module.
6. Disconnect and replace both internal batteries with 2x P/N FP-18156 Replacement Backup Battery.
7. Reconnect main supply input and control panel output.
8. If installed correctly, the "Charging" LED will indicate on the Power Control Module and the Control Panel will not be in a fault condition.
9. Disconnect the FirePro FP-08800 Test Module and reconnect all installed FirePro aerosol generators.

9 Troubleshooting

Problem	Possible Cause	Solution
"Charging" LED not illuminating	Poor/Reversed connection to vehicle battery OR Inline fuse has blown OR Internal battery disconnected	Check connection and polarity of battery lead and any extension cables. Check condition of the inline fuse and replace if necessary. Check connection to internal battery.

For additional assistance, contact your supplier.

10 Specifications

	FP-08872/73
Dimensions - mm	139L x 64W x 35D
Enclosure material	Die Cast Aluminium
Operating voltage	10vDC / 20vDC
Internal Battery	2x 9.6v NiMH battery 450mAh
Outputs	Power max 2.A at 12vDC
Fuse	2A Polyswitch self-resetting
Fault-sensing	Indicators for Power Source Only
Operating Temp.	-40 to 85ºC
Ingress Protection	IP65