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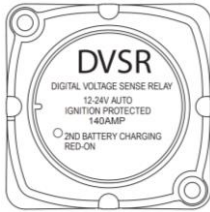
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1 Introduction

1.1 General Information

The FP-08879 Digital Voltage Sensitive Relay (DVSR) provides a plug-in solution for DC power supply monitoring and battery isolation. When installed the FP-08879 monitors and automatically isolates the incoming power supply when the incoming power drops below an ideal operating voltage. This avoids deep discharge of batteries.

2 Component List



FP-08874 Power Control Module

Digital Voltage Sensitive Relay, 12 - 24vDC, automatic low voltage cutoff

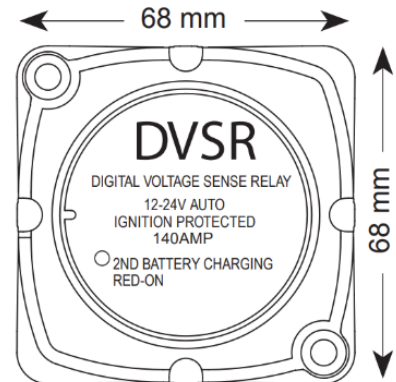
3 Operations

3.1 Mounting

The Module must be mounted using the bracket supplied.

No penetrations are to be made through the casing.

The Power Control Module enclosure is rated IP65, mounting should be away from where it may be affected by water.



3.2 Power Supply Monitoring

The FP-08879 DVSr is a multi-voltage to operate on either 12vDC or 24vDC. When the DVSr is first powered, it will automatically sample the incoming power supply:

12vDC (7-15.9 volts)

or

24vDC (16 – 32 volts)

The DVSr requires continuous power for 5 seconds to determine the incoming power. Once power mode is selected, the DVSr will remain in this mode until power is disconnected.

3.3 Automatic Cutoff

Once the FP-08879 DVSr has determined the operating voltage, it will monitor the incoming power supply. The incoming power supply must drop below operating voltage continuously for 4 seconds before the DVSr will automatically cut off the incoming power supply.

Mode	Engages	Cutoff
12vDC	13.4vDC	12.8vDC
24vDC	26.8vDC	25.6vDC

3.4 Fire Indicator Panel (FIP)

The FIP will then switch to backup power until the primary power supply is restored.

Backup Power Control Modules are designed to provide power to the fire system for a period of 24 hours. Actual backup power will be available based on the condition of the batteries and this will largely be determined by machine run time.

The backup battery is charged by the primary power supply, and approx 1 hour of run time will provide 1 hour of battery backup, if the backup batteries have been allowed to run flat.

IMPORTANT – where Sealed Lead Acid Backup Batteries (Models 8870 and 08871) have been installed these will need to be replaced. SLA batteries will not recharge once they have run flat. These can be swapped for FP-08872 NiMh battery pack.

When primary power is restored, the fire system will be operational, and will stay fully




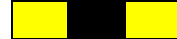

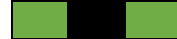



operational until the backup battery is depleted.

Note that FirePro systems have a failsafe, the FirePro Generator will self-activate once the temperature reaches 300°C.

3.5 Cabling Requirements

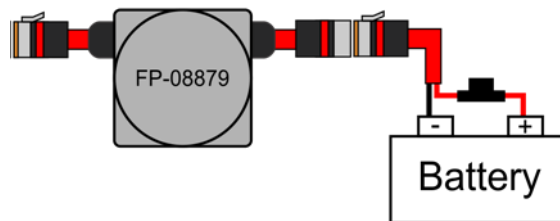
The cables are marked RED on the module, and the plugs are setup Male/Female to ensure correct installation.

Cables are colour coded for easy identification. When installing system, cables should be only connected to the correctly coded cable.

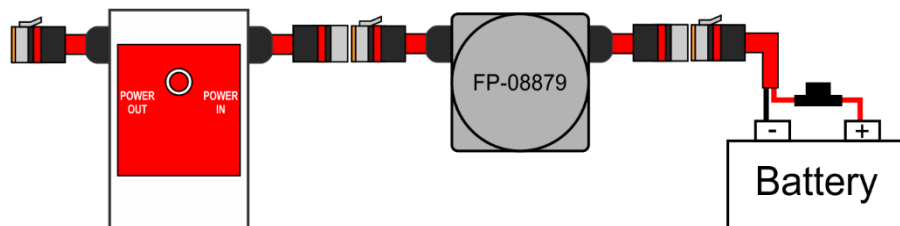
Colour	Circuit
	Red 1 Power Supply
	Red 2 Backup Batteries
	Yellow 1 Activation
	Yellow 2 Activation Delayed
	Green 1 Detection 1
	Green 2 Detection 2
	Blue Discharge Advice
	Orange Siren/Strobe
	White Relay Output

4 Installation

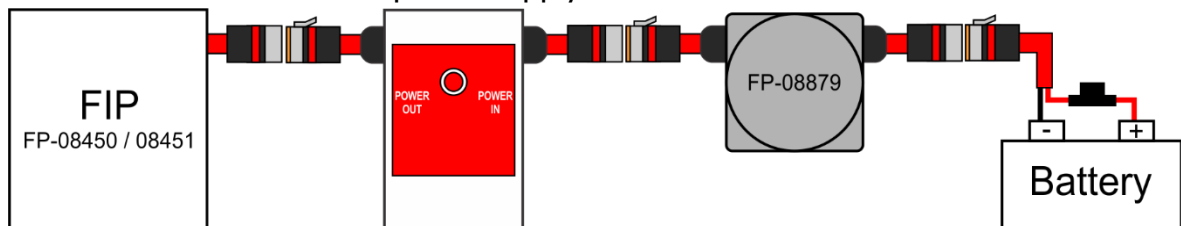
1. Ensure fire control panel is not in an alarm/fault condition.
2. The machine MUST NOT be running.
3. Unplug the Power supply to the FIP.
4. Unplug the FP-14016 Battery Lead from Battery Pack and plug into FP-08879 DVSR. The DVSR requires a minimum of 5 seconds to allow sampling of the incoming power supply, to determine operating voltage. This will be indicted by flashing of the LED indicator. When sampling is complete the LED indicator will stop flashing and remain illuminated.



5. Connect the FP-08879 to a compatible Power Control Module (FP-08872/08873). The "Charging" LED indicator will illuminate on the Power Control Module connected correctly.



6. It is now safe to connect the power supply to the FIP.



5 Operation

The FP-08879 DVSR operates when the unit is installed and the Main power is active. Should the main supply fail or drop below operating voltage, the module automatically cuts off the primary power supply. When the primary supply has been connected the LED will illuminate to indicate that the primary power supply is available.

When the primary supply has failed or dropped below operating voltage will flash once every 5 seconds to indicate that the primary power supply is being cut off.

If the primary power supply voltage is too high, the DVSR will flash rapidly.

6 Commissioning

Commissioning should be performed after installation.

1. Ensure fire control panel is not in an alarm/fault condition.
2. Run the machine, this should allow full power to the FIP.
3. TURN OFF machine and the Lower voltage will automatically disconnect primary power supply (depending on state of main machine battery voltage) and ensure LED indicator begins flashing.
4. Ensure power supply to FIP automatically switches to the backup batteries. This will be indicated by the LED on the installed Power Control Module switching off, and the FIP should remain operational.
5. Ensure fire control panel remains operational and out of fault condition.

7 Servicing and Maintenance

Inspection and servicing of the installed fire system should occur in accordance with the relevant Australian Standards. Monitoring and operation of any installed modules should be tested as outlined in 6. Commissioning.

8 Troubleshooting

Problem	Possible Cause	Solution
LED not illuminating	Poor/Reversed connection to vehicle battery OR Incoming power Voltage not high enough to engage DVSR	Check connection and of battery lead and any extension cables. Test voltage of primary power supply. Charge or replace primary batteries.
LED flashing rapidly	Incoming power voltage is above upper limit of operating voltage.	Check main supply voltage.

9 Specifications

	12vDC Main Supply	24vDC Main Supply
Dimensions - mm	68L x 68W x 50D	
Operating voltage	9-15vDC	16-32vDC
Disengages	12.8vDC	25.6vDC
Engages	13.4vDC	26.8vDC
Fault-sensing	Indicators for Power Source(s) Only	
Operating Temp.	-40 to 85°C	