

PS104-54-RWD  
**Power Supply / Battery Charger**  
54V 2A Unit

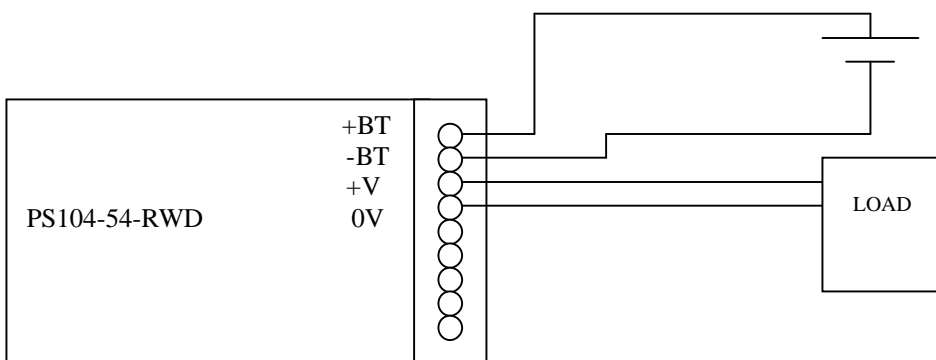


**The PS104- 54- RWD is a high efficiency switch mode battery charger with sophisticated microprocessor controlled battery impedance testing and fault reporting.**

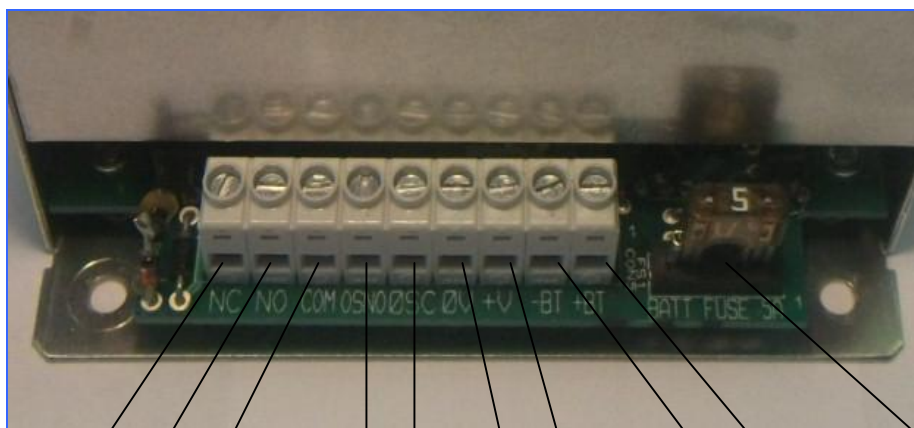
**Features**

- **54V Power Output and Battery Charging up to 2A**
- **Mains Input 180V – 264V and 90V – 132V (Link Selectable)**
- **Green Mains Indicating LED**
- **Yellow Fault Indicating LED**
- **Fully Protected Against Overload and Short Circuit**
- **Electronic Load Shed to Prevent Deep Discharge of Batteries**
- **Fully Boxed**
- **Size: 171mm x 101mm x 55mm**
- **Electronic Reverse Polarity Protection**
- **Fault Mode Fail Safe Battery Output Fuse**
- **Separate Output Connection for Load and Batteries**
- **Volt- Free Contacts for Fault Reporting**
- **Safety to EN60950- 1: 2006**
- **EMC to EN55022- B**

### Connection Diagram



### Connection Details



Volt-Free Relay  
Contacts  
NC  
NO  
COM

No Connection

Connect the  
Load here  
0V  
+V

Connect the  
Battery here  
-BT  
+BT

Catastrophic  
Fail Battery  
Protection  
Fuse

## Additional Technical Information

### Connecting the Load and Batteries

The correct way to connect the load (equipment) to the batteries is to connect the load to the 0V and +V terminals and the battery to the - BT and +BT terminals.

When connected like this the PS104- 54- RWD controls charging the batteries and connects the batteries to the load (equipment).

When connected like this the PS104- 54- RWD will provide *load shed\** thus preventing deep discharge of the batteries in the event of long-term mains fail.

*\*load shed*

*When the unit has no mains power and the batteries are providing power to the load (equipment) it is important that the batteries are not allowed to run down to deep discharge because the batteries may be permanently damaged.*

The PS104- 54- RWD automatically protects the batteries from deep discharge. The unit measures the output voltage of the batteries when operating without mains and when the battery voltage has fallen to 90% of its nominal voltage an electronic switch disconnects the batteries from the load.

On this unit load shed will operate soon after the battery voltage falls below 43.2V (90% of 48V).

### Green Mains Indicating LED

This will be ON to indicate mains is present

### **Yellow Fault Indication LED**

**No Fault = LED OFF**

**Mains fail = LED single flash repeated at regular intervals**

**Charger fail = LED single flash repeated at regular intervals**

**Incorrect output voltage = LED two flashes repeated at regular intervals**

**Battery impedance fault = LED three flashes repeated at regular intervals**

**Battery missing or Reverse Battery = LED four flashes repeated at regular intervals**

**Microprocessor fail = LED continuously ON**

### **Protection**

**The PS104- 54- RWD has sophisticated circuits to prevent damage from the high currents that can flow when well charged batteries are misconnected in some way. In nearly all cases the unit will electronically protect itself from misuse.**

**The 5A battery fuse is only present as an absolute fail- safe to prevent against fire risk in the event of additional damage or malfunction of the internal electronics.**

### **Operating Temperature**

**- 10C to +50C**



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