ZM9124 REGULATOR USER MANUAL

Safety Instructions

1. Make sure your battery has enough charge for the controller to recognize the battery type before first installation.
2. The battery cable should be as short as possible to minimize loss.
3. The regulator is suitable for lead acid batteries (Flood, AGM, GEL, Lithium Iron Phosphate (LiFePO4) and Lithium-Ion. **MAKE SURE IT IS SET TO THE CORRECT TYPE!** It is not suited for nickel metal hydride, or other batteries.
4. The charge regulator is only suitable for regulating solar modules. **DO NOT ATTEMPT TO USE ANY OTHER CHARGING SOURCE!**
5. The controller will be hot when it is working. Please install the controller on a smooth, well-ventilated surface.

Product Features

1. Built-in industrial micro controller.
2. Big LCD display.
3. Fully 3-stage PWM charge management.
5. Dual mosfet reverse current protection, low heat production.

LCD Display/Key

- Voltage
- Battery
- Load
- Hour
- Timer
- System connection - NB: MUST BE IN FOLLOWING ORDER!

1. Connect the battery to the charge regulator plus and minus.
2. Connect the photovoltaic module to the regulator plus and minus.
3. Connect the load to the charge regulator plus and minus.

**To avoid damage, disassembly must be reverse order (Load, PV array, battery).**

Display/Setting

- **Main display**
- **Float or CV voltage**
- **Battery type**
- **Discharge reconnect**
- **Work mode**
- **Discharge stop**

Browsing Interface

Press "Menu" to step through settings.

Trouble Shooting

<table>
<thead>
<tr>
<th>Situation</th>
<th>Probable Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charge icon not on when sunny</td>
<td>Solar panel faulty or reversed</td>
<td>Reconnect</td>
</tr>
<tr>
<td>Load icon off</td>
<td>Mode setting wrong</td>
<td>Set again</td>
</tr>
<tr>
<td>Load icon slow flashing</td>
<td>Over load</td>
<td>Reduce load</td>
</tr>
<tr>
<td>Load icon fast flashing</td>
<td>Short circuit protection</td>
<td>Auto reconnect</td>
</tr>
<tr>
<td>Power off</td>
<td>Battery too low or Reverse connection</td>
<td>Check battery, Recharge</td>
</tr>
</tbody>
</table>

Technical Parameter

<table>
<thead>
<tr>
<th>Battery Type</th>
<th>Equalization</th>
<th>Float Charge</th>
<th>Discharge Stop</th>
<th>Discharge Reconnect</th>
</tr>
</thead>
<tbody>
<tr>
<td>b01 Sealed</td>
<td>14.4V</td>
<td>Default 13.7V</td>
<td>10.7V</td>
<td>Default 12.6V</td>
</tr>
<tr>
<td>b02 GEL</td>
<td>14.2V</td>
<td>Default 13.7V</td>
<td>10.7V</td>
<td>Default 12.6V</td>
</tr>
<tr>
<td>b03 Flood/AGM</td>
<td>14.6V</td>
<td>Default 13.7V</td>
<td>10.7V</td>
<td>Default 12.6V</td>
</tr>
</tbody>
</table>

**NOTE:** b04 - b07 Parameters are not adjustable.

USB Output: 5V/2A
Standby: < 10mA
Operating Temperature: -35 ~ +60℃
Size/Weight: 133*70*34mm/154g