Chapter One Overview

Instruments introduction

- Bidirectional detecting current. As for the users who want to measure charging and discharging electricity, it can automatically identify and detect the two-way current without changing the wiring direction.
- Power off memory function. It can save the AH value before powering down so that it is convenient to observe and measure.
- AH value automatic self-cleaning function, no need to calibrate the next measurement.
- Voltage, current, charge capacity AH, WH, and power at the same time to display on one screen, shows information comprehensive and clear.
- Output shutdown key, flexible open or shut off output (needs relays).
- LCD screen can be manually switched off, or it less than 300mA, screen out automatically after one minute.
- Using Hall sensors to test current, the current wire through sensor hole, positive and negative direction of current can be detected, safe and convenient.

Chapter Two Instrument Instructions

Sheet 2-1 VAC9010H technique target

Table 1-1 VAC9010H technique target

<table>
<thead>
<tr>
<th>Number</th>
<th>Symbols</th>
<th>Description</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Input</td>
<td>Power supply (10-90)V</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Voltage</td>
<td>Adjustable</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Display</td>
<td>128×64 pixels</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Resolution</td>
<td>0.01V</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Current resolution</td>
<td>0.1A</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Battery</td>
<td>10.8-16.8V</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Protection</td>
<td>Over voltage protection, over current protection, over power protection, etc.</td>
<td></td>
</tr>
</tbody>
</table>

Sheet 2-2 1 VAC9010H front panel

Table 2-1 VAC9010H Control Key

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User’s manual</td>
<td>PDF version</td>
</tr>
<tr>
<td>Host</td>
<td>VAC9010H (include the display meter and power expansion board)</td>
</tr>
</tbody>
</table>

Chapter Three Using Instructions

Connections

This circuit is the diagram of discharge mode, it just need to charge load into the charger when charging, without changing the circuit. Current inputs from the front of transformer, output to back means remaining electricity decreases, conversely, remaining electricity increases.

- **Image 1-2 is no relay power supply wires connection.**
- **Image 1-3 is no relay independent power supply wires connection.**
- **Image 1-4 is the relay independent power supply wires connection.**

Expanding function instruction

- **OVP** over-voltage protection. If the OVP value has been set and opened the OVP protection options, when the input voltage exceeds the setting voltage, the tester will automatically cut off the output, yellow cursor to “OVP”, press OK to open the output to start again.
- **OCP** over current protection. If the current value has been set and opened the OCP protection option, when the input current exceeds the setting current, the tester will automatically cut off the output, yellow cursor to “OCP”, press OK to open the output to start again.
- **ODA** over capacity protection. If the AH value has been set and opened the ODA protection option, when the AH value is higher than the setting AH value, the tester will automatically cut off the output, yellow cursor to “ODA”, press OK to open the output to start again.
- **OTF** over temperature protection. If the current value has been set and opened the OTF protection option, when the actual voltage value is lower than the setting protection voltage, the tester will automatically cut off and OUF and AH value will reduce with time cumulative. When the arrow behind “OTF” is red and pointing to the right, the current is cut and AH value will reduce with time cumulative.

**Operating Notes:**

- **Screen** can be manually switched off and manually switched on. It also can be automatically extinguishing screen when the current lower than 300mA and it lasts one minute. And it can be set automatically brighten screen when the current higher 300mA.
- **OVP** over voltage protection. The yellow pointer moves to OVP, press OK, screen out, press OK to recover.
- **OAH** Electricity setting (suggestion: it can set during calibration): If the yellow pointer is near the OAH, long press OK key to enter the parameter setting, press OK key to save the setting after finishing. (suggestion: Add the full value in the first full-charge).
- **OCP** over current protection. The yellow pointer moves to OCP, press OK, and then press OK key, power on; after, the protection turned off, yellow cursor to “OCP”, press OK to open the output to start again.
- **ODA** over capacity protection. The yellow pointer moves to ODA, press OK, then press OK key, power on; after, the protection turned off, yellow cursor to “ODA”, press OK to open the output to start again.
- **OTF** over temperature protection. The yellow pointer moves to OTF, press OK, and then press OK key, power on; after, the protection turned off, yellow cursor to “OTF”, press OK to open the output to start again.

**Expanding function settings**

If you want to open an extension function, moving yellow cursor to the corresponding item. Press OK and the indicator light will be turned into green, if means open the protection; if the indicator light turns into gray, it means close the protection. Please set parameters before opening protection. Method: long press OK about three seconds to enter the protection function parameter setting page. When you set the OVP value, you can automatically turn off screen, press the button to open the screen.

**Expanding function instruction**

**Expanding function instruction**

When you get a new VAC9010H voltage current meter, we recommend that you follow below steps to check the instrument:

- Check for damage caused by transport.
- Check the content is complete. Contents of packing box as below:
- If content or instrument is damaged, please contact your dealer or company.

Display Resolution: 0.01V
Current Precision: ±2%±0.005d/digits
Voltage Measurement Range: 0-50V
Current Measurement Range: 0-200A
Resolution: 0.01A
Display: 128×64 pixels
Protection Function Parameter Settings Page.