LED INDICATORS

AC PowerCube 24/7000
Sine wave inverter

High power from your battery! Professional standalone sine wave inverter

Thank you for purchasing the WP-ACP WhisperPower AC PowerCube SineWave Inverter. The WP-ACP allows you to produce 230V AC @90% output power from a battery.

The WP-ACP basically consists of a battery charger and a (DC/AC) inverter, all combined in one unit. The components convert the battery voltages into high DC voltage, the inverter injects the high DC voltage to an inverter, which then produces AC @90% output power.

TABLE OF CONTENTS
1. Introduction
2. Instructions for use
3. Troubleshooting
4. Installation
5. Warranty terms and conditions
6. Specifications
7. Conformity declaration

1. INTRODUCTION
Use of this manual
This manual serves as a guideline for safe and effective installation and use of the WP-ACP, as well as correct operation and, if necessary, troubleshooting. It is recommended to keep the manual in good condition for future use. It should be kept in a dry and clean place, and available any time.

General precautions
To ensure safe and adequate operation of the WP-ACP, it is obligatory that handling and safety instructions detailed in the manual are followed at all times. Everyone working on or with the WP-ACP should be familiar with the contents of this document.

Also bear in mind that all applicable (safety) standards and (local) regulations must be followed at all times.

Furthermore, any alteration to your electrical system shall be carried out by qualified electricians.

IMPORTANT!
Throughout this manual, the following alert symbol is used to indicate potential hazards or dangerous situations.

CAUTION! Risk of equipment damage or personal injury
Always be aware of the fact that your actions may have an impact on safety and/or product performance. Carefully follow the instructions documented.

2. INSTRUCTIONS FOR USE

CAUTION!
- Follow the safety guidelines, as prescribed by the battery manufacturer, when working with batteries.
- Do not use excessive water in case battery acid would come in contact with your eyes or skin and seek medical attention.
- Avoid sparks and/or short circuit; do not place metal objects on top of the batteries.
- Never smoke near the WP-ACP or allow flames or heat in the vicinity of batteries.
- To prevent overheating, NEVER block ventilation.
- CAUTION! Risk of personal injury
- The unit is running ventilator.
- The ventilator may be obstructed anywhere.
- Make sure ventilation is not obstructed anywhere.
- The unit will automatically shut off when battery voltage reaches 22V.
- The AC output voltage is switched off for 60s if ambient temperature is higher than 50°C.

3. TROUBLESHOOTING

3.1. Circuits
- The following symbols are used in the troubleshooting sections:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.C.</td>
<td>DC Current</td>
</tr>
<tr>
<td>A.C.</td>
<td>AC Current</td>
</tr>
<tr>
<td>V.P.</td>
<td>Voltage Protection</td>
</tr>
<tr>
<td>O.V.P.</td>
<td>Overvoltage Protection</td>
</tr>
<tr>
<td>U.V.P</td>
<td>Undervoltage Protection</td>
</tr>
<tr>
<td>U.V.P.</td>
<td>Undervoltage Protection</td>
</tr>
<tr>
<td>U.V.P.</td>
<td>Undervoltage Protection</td>
</tr>
<tr>
<td>U.V.P.</td>
<td>Undervoltage Protection</td>
</tr>
</tbody>
</table>

3.2. Remote control display

WP-ACP main control panel
By pressing the main switch on the main display to ‘Remote’, the WP-ACP becomes active.

WP-ACP remote control panel
When the main switch on the main display is set to ‘On’, the WP-ACP will operate in inverter mode.

Error detection
In case of an error occurring, these LED indicators will help trace the cause of situation and solve the problem.

3.3. AC output monitoring
Similar to the main display, the WP-ACP monitors the AC current and voltage output status bars for AC power and the AC current load (in %).

AC output monitoring

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.C.</td>
<td>DC Current</td>
</tr>
<tr>
<td>A.C.</td>
<td>AC Current</td>
</tr>
<tr>
<td>V.P.</td>
<td>Voltage Protection</td>
</tr>
<tr>
<td>O.V.P.</td>
<td>Overvoltage Protection</td>
</tr>
<tr>
<td>U.V.P.</td>
<td>Undervoltage Protection</td>
</tr>
</tbody>
</table>

4. INSTALLATION

4.1. WhisperPower Inverter Control

5. WARRANTY TERMS AND CONDITIONS

6. SPECIFICATIONS

7. CONFORMITY DECLARATION

DISCLAIMER
WhisperPower BV accepts no responsibility for possible errors or omissions in catalogues, brochures and other printed material. WhisperPower reserves the right to alter its products without notice. This guide must be followed carefully. WhisperPower can accept no responsibility for errors relating to incorrect or unsafe installation and/or handling.

Kelvinlaan 82, 9207 JB Drachten, The Netherlands, Tel: +31 (0) 512 571 550, Fax: +31 (0) 512 571 599, info@whisperpower.com, www.whisperpower.com
4. INSTALLATION

CAUTIONS
Risk of fire, explosion and/or equipment damage
- The WP-ACP has been designed for indoor use. Do not expose the system to direct, rain, snow or hazards of any type.
- Never install ventilation airways in any way.
- Keep a free space of 200mm around the system.
- Never place the unit directly above the batteries; corrosive gases emerging from batteries can have a damaging impact.
- Check the battery identification plates prior to installation as to assure that the battery voltages match the product's electrical requirements.
- Batteries can be damaged if the product is operated under conditions of high battery temperature.

Installation prerequisites
- Mount the WP-ACP exactly on a solid wall. Position the system at a designated location, with the connecting cables downwards.
- When the system is to be installed in a cabinet, make sure that the control panel remains accessible.
- Use DC battery cables of at least 70mm².
- Always integrate a fuse when connecting the batteries.
- Protect the equipment to be supplied by the WP-ACP output by AC fuse of 16Amps maximum. Harmful impact.

Step 1: Positioning the WP-ACP housing
- Determine the housing mounting points; dimensions are presented in drawings below. Use screws / bolts of Ø 6mm. Surface, the back cover can be used as a drill guide: 
- Drilling the screws tips into the wall, but do not tighten completely. Then place the WP-ACP housing over the screws and fix by fastening the screws securely.

Step 2: Connecting input and output cables
- The picture below presents a detailed (bottom) view of the connectors section, showing the PCB print circuit board connectors:
- Use the PDU jacks connectors to the PDU - power panel without neutral bonding.
- Screw the battery bank 1 (minus) to the input battery bank 2 (plus) of WhisperPower systems.
- Connect this port to your computer interface to be able to see the interface instead of remote panel remote switch.

Output 'grid' AC
Including neutral bonding.
Flexible PVC - FE connectors on the PDU - personal switch without neutral bonding.

EXPLANATION OF THE PCB PORTS AND CONFIGURATION:
- External command
  (Phoenix MSTBA2/4-G-5.08)
  1 LED
  2 Switch
  3 On LED
  4 Failed LED
- Remote control panel
  FLU4 port for integration of multiple WhisperPower systems.
- USB Type 2
  Use this port to not output parameters.

DIP switch 1-8
- Relay NC/NO/COM
  Relay on status ➔ ON or OFF
- Relay NC/NO/COM
  Relay off status ➔ ON or OFF
- Failure error status ➔ No Error or Error
  Only applicable when relays ON
- Digit1 ➔
  Connect this port to your computer interface to be able to see the interface instead of remote panel remote switch
- Digit2 ➔
  Not connected

Step 3: Realising PCB ports connections
- The picture below presents a detailed (bottom) view of the connectors section, showing the PCB print circuit board connectors:
- Use screws / bolts of Ø 6mm. Surface, the back cover can be used as a drill guide:
- Drilling the screws tips into the wall, but do not tighten completely. Then place the WP-ACP housing over the screws and fix by fastening the screws securely.

5. SPECIFICATIONS

6. WARRANTY TERMS AND CONDITIONS
WhisperPower guarantees that the equipment has been built according to the legally applicable standards and specifications.

7. CONFORMITY DECLARATION
Issuer's name: WhisperPower B.V.
Issuer’s address: Kelvinlaan 82, 9207 JB Drachten, The Netherlands, Tel: +31 (0) 512 571 550, Fax: +31 (0) 512 571 559, sales@whisperpower.com, www.whisperpower.com

WhisperPower BV