

***Qoltec***<sup>®</sup>

**Model: 51924-51929**

**INSTRUCTION MANUAL**  
**INVERTER WITH MODIFIED WAVEFORM**  
**EN**

## **INTRODUCTION**

Thank you for your trust and for choosing the Monolith by Qoltec Modified Sine Wave Inverter. We are confident that the product will meet your expectations. This manual contains instructions for the installation and use of the product, including important safety instructions for proper operation and installation. If you have any questions after reading this manual, please contact our Customer Service Department.

## **SAFETY INSTRUCTIONS**

Warning! Please read the safety instructions when assembling and using the inverter.

1. The inverter should be used in a well-ventilated area, away from direct sunlight, water and other flammable substances. To reduce the risk of danger, do not expose the inverter to adverse conditions such as rain, snow, frost, fog, oily dirt and heavy dust during installation. Do not install the inverter in a closed room and do not cover or block the ventilation openings.
2. The inverter should not be installed in areas exposed to fire, electric shock, the presence of cables that do not comply with standard specifications.
3. As the inverter contains components susceptible to arc discharge, it must not be installed in flammable and explosive environments.
4. If the electrolyte comes into contact with your skin or clothing when connecting the battery, wash immediately with clean soapy water. If the acidic substance gets into your eyes, flush them with clean water for at least 20 minutes and go to hospital for consultation as soon as possible.
5. Do not place metal tools on the battery as this may damage the battery or inverter components due to sparking caused by a short circuit.
6. It is forbidden to insert small metal objects such as iron needles and iron pins into the product. Keep the device away from water.
7. Children are prohibited from using this product and it is not permissible to touch the terminals, output socket fan, etc. with their fingers to avoid injury and electric shock.
8. Before connecting, ensure that the input voltage of the inverter corresponds to that of the battery or power source.
9. Avoid overloading the inverter, do not connect devices with higher power than the maximum permissible power of the inverter.

## **PRODUCT CHARACTERISTICS AND USE**

## Features

- Modified sine wave
- High efficiency, low weight
- Housing made of high quality aluminium
- LED indicates load status
- Fully automatic cooling fan control (load)
- Microprocessor-based design
- Soft start, effective maintenance of battery life
- Low voltage / overload / short circuit / over voltage / over temperature alarm system

## Application

- Office equipment: computers, printers, monitors, copiers, scanners, etc.
- Electronic equipment: Televisions, games consoles, radios, power amplifiers, music equipment, monitoring equipment, server, satellite communication equipment, etc.
- Lighting

## INSTRUCTIONS FOR USE

**Warning!** There is high voltage inside the product. Do not open the inverter or attempt to repair it yourself. Persons without specialist knowledge are strictly prohibited from disassembling or modifying it without authorisation, and the company is not liable for any infringements. Follow the instructions below.

1 Battery selection: Please use lead-acid, AGM, GEL batteries, the input voltage is 12V. For MS Wave 600W Inverter (300W/600W) model 51924, please choose a battery capacity of more than 30AH. For MS Wave 2000W Inverter (1000W/2000W) model 51926, please select a capacity above 100AH etc.

2. when connecting the equipment to the inverter, make sure that the power consumption is within the inverter power. The power consumption must not exceed the maximum power of the inverter when the equipment is started up.

Low voltage protection: When the battery voltage is too low, the inverter will issue an alarm, indicating that the supply voltage has decreased and the battery needs to be recharged. For example: when the input voltage of the inverter is lower than  $10.5V \pm 0.5V$  the inverter will first sound an alarm and the red LED indicator will light up and the AC output device will be switched off.

Overvoltage protection: when the battery voltage is too high, the indicator will give an alarm, indicating that the DC input voltage is too high and the battery must be discharged as soon as possible. When the input voltage of the inverter reaches  $15.5V \pm 0.5V$ , the red LED indicator will light up and the AC output device will be switched off at the same time.

## WIRING DIAGRAM OF BATTERY AND INVERTER EQUIPMENT

(Photos 1 and 2 attached)

## PROBLEM SOLVING

| PROBLEM   | POSSIBLE CAUSE   | SOLUTION  |
|---|--|---|
| Inverter does not work when power is first applied                | Battery not connected correctly. The connection on the battery side is loose.<br>Battery voltage is too low. | Check the battery and cable connections.<br>Check the DC fuse.<br>Charge the battery.   |
| An alarm is triggered   | The input voltage of the inverter is lower than $10.5 \pm 0.5VDC$ (12V)                                      | 1. check that the battery charge is sufficient, if not, recharge the battery as soon as possible.<br>2 Check that the battery cable is thick enough to conduct the required length of current. If necessary, thicker wires can be used.<br>3. tighten the battery input circuit connection. |
| An audible alarm sounds and the red LED flashes 2 times every 1s. | The input voltage of the inverter is lower than $15.5 \pm 0.5VDC$ (12V)                                      | 1. Check that the voltage at the DC input terminal is greater than 15.5VDC.   |
| The audible alarm sounds and the red LED flashes 3 times every 1s | Inverter overheats   | 1 Check that the fan is operating normally. If this is not the case, the fan or the fan control circuit may be faulty, contact technical support.<br>2. if the fan is running, check that the vents on the inlet side are correctly positioned. The air                                     |

|  |  |   |
|--|--|---|
|  |  | <p>outlet of the fan must not be blocked.</p> <p>3. if the fan is operating normally and the window is not blocked, check that there is sufficient cold spare air. Also check that the ambient temperature is below 45°C.</p> <p>4. reduce the load to reduce the heating effect.</p> <p>Once the cause of overheating has been eliminated, the unit will automatically reset itself.</p> |
| Audible alarm and red LED on   | Inverter is overloaded                                     | <ol style="list-style-type: none"> <li>1. Disconnect the load.</li> <li>2. Reduce the load.</li> <li>3. Check for a short circuit at the output.</li> </ol>   |
| The inverter operates normally but there is no voltage at the AC output. | Transmission error. Incorrect connection by the user, etc. | <ol style="list-style-type: none"> <li>1. Check that the device is connected correctly.</li> <li>2. check for abnormal noises inside the product</li> <li>3. Contact technical support.</li> </ol>  |

| Model         | 51924       | 51925 | 51926 | 51927 | 51928 | 51929 |
|---------------|-------------|-------|-------|-------|-------|-------|
| Rated power   | 300W        | 600W  | 1000W | 1500W | 2000W | 2000W |
| Peak power    | 600W        | 1200W | 2000W | 3000W | 4000W | 6000W |
| Output factor | AC 230V±10% |       |       |       |       |       |
| DC input      | 12V         |       |       |       |       |       |

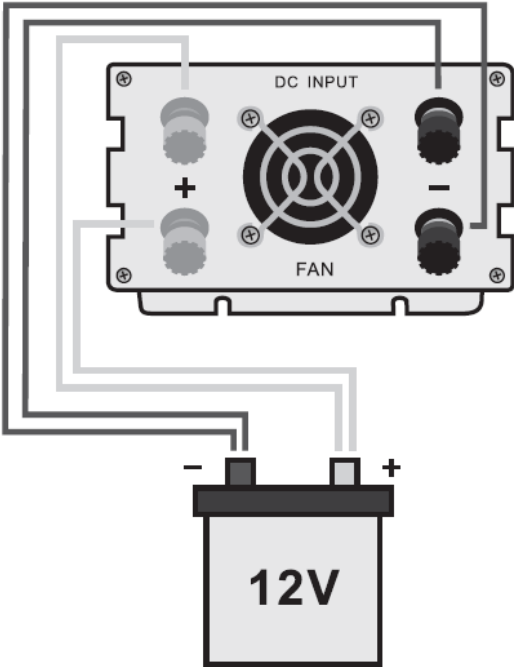
## TECHNICAL SPECIFICATIONS

## CONSERVATION

1. Regularly check the condition of cables and connections.
2. The inverter should be cleaned with a dry cloth, do not use liquids or chemicals.

ATTACHMENT 1

1



2

