

Pure Sine Wave UPS 600W-12V User Manual

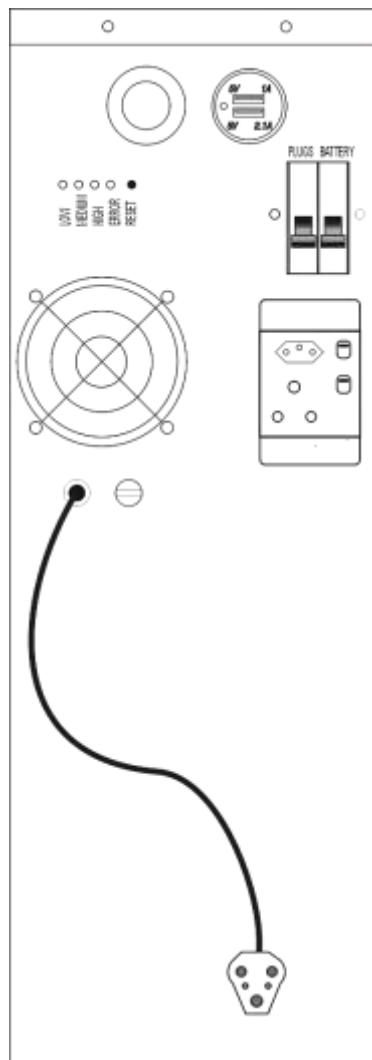


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1. INTRODUCTION

1.1 General Description

The Microcare 600W 12V UPS is designed as an easy plug-in solution for loadshedding and backup power for domestic and business applications. When the grid returns with a fluctuating voltage, the UPS can delay to a set transfer time to avoid load damage.

1.2 Key Features

- Lithium Iron Phosphate Battery (LiFePO4)
- Stainless Steel Enclosure or Powder coated option available
- No Programming Required
- High Surge Capacity
- Low Idle Current
- 12V Socket Output
- 220V Output for Lights, TV & Laptops
- 5V USB Output for Cell phone Charging
- Fan Cooling for Optimum Performance
- Protection against Short Circuit
- 5 Year Carry-In Warranty (excluding the battery)
- Minimum Service Turnaround

2. SAFETY INSTRUCTIONS

2.1 Installation Location

- Place the UPS indoor in a dry protected location away from any sources of moisture.
- The mounting surface must support the weight of the UPS.
- Exposure to saltwater is particularly destructive.
- Do not place the UPS in a closed container.
- Unrestricted airflow is required for the UPS to operate at optimal efficiency.
- Ensure a 200mm unrestricted clearance at the top, left and right side of the UPS.

2.2 Precautions When Working with Batteries

- Ensure that both circuit breakers are switched off and all loads disconnected before connecting or disconnecting the battery leads.
- Be cautious not to drop any tool or metal objects on the battery, this can cause a short circuit or spark and could cause an explosion.
- Remove metal items like rings, bracelets and watches when working with batteries, this could cause a short circuit and cause a severe burn.

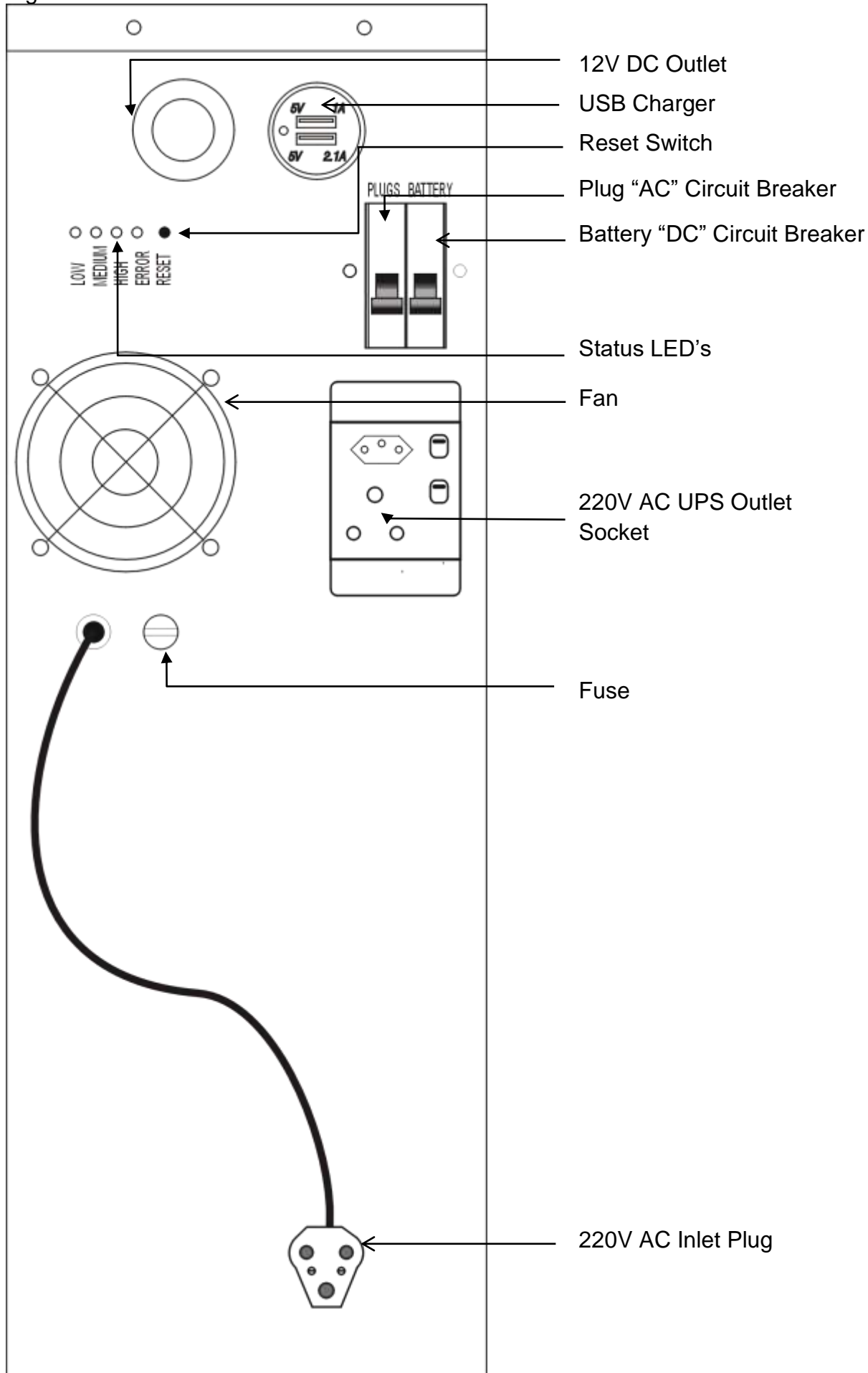
2.3 Battery Reverse Polarity Connection

- Incorrect battery polarity connection can cause severe damage to the UPS.

3. UPS OVERVIEW

3.1 UPS Side View

Figure 3-1



3.2 Status LED's & Reset Switch

Y = Yellow LED

G = Green LED

R = Red LED



3.2.1 State of Charge

1ST Yellow LED solid on = Low State of Charge

2nd Yellow LED solid on = Medium State of Charge

Green LED solid on = High State of Charge

3.2.2 Charging

Green LED flashing = Battery Charging

Note the battery only charges when ESKOM is present

3.2.3 Error LED

Red LED solid on = Error

The error occurs when the system is overloaded


3.2.4 Reset Button

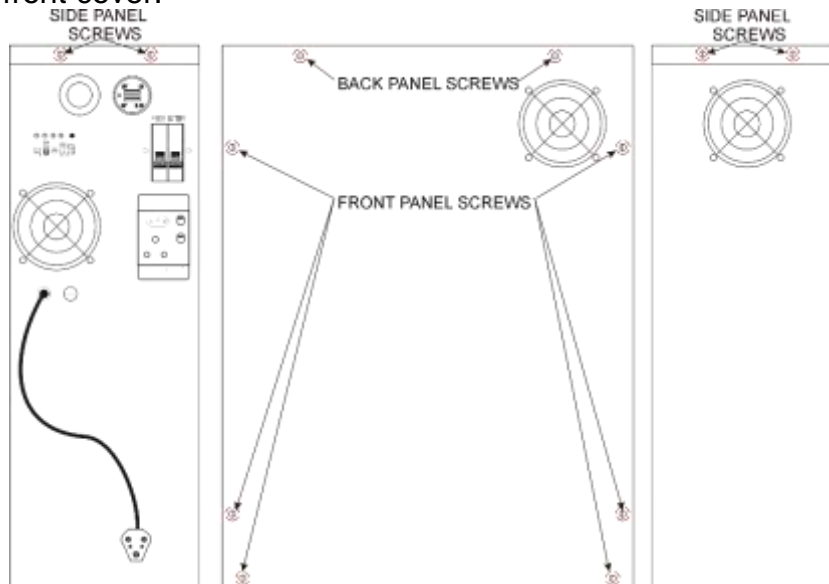
To clear the error LED. Disconnect or reduce the load and push the Reset Button for 3 seconds. The UPS should restart.

4. GENERAL WIRING INFORMATION

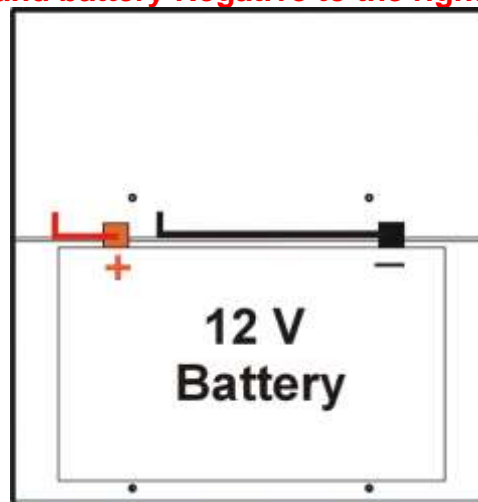
- Familiarize yourself with the content of the manual following before commencing with the wiring.

4.1 Battery Wiring

- Ensure that the Battery and Plug circuit breaker is in the off position. 
- UPS AC inlet plug is unplugged from the wall socket.
- Remove the front/side and back panel screws.
- Remove the front cover.



- Insert the battery into the battery compartment.
- **Battery Positive to the left and battery Negative to the right.**



- Connect the Positive (Red) battery lead from the UPS to the positive post of the battery.
- Connect the Negative (Black) battery lead from the UPS to the negative post of the battery.
- Ensure that the battery lead lugs are properly tightened.
- Refit the front cover.

4.2 AC Connections



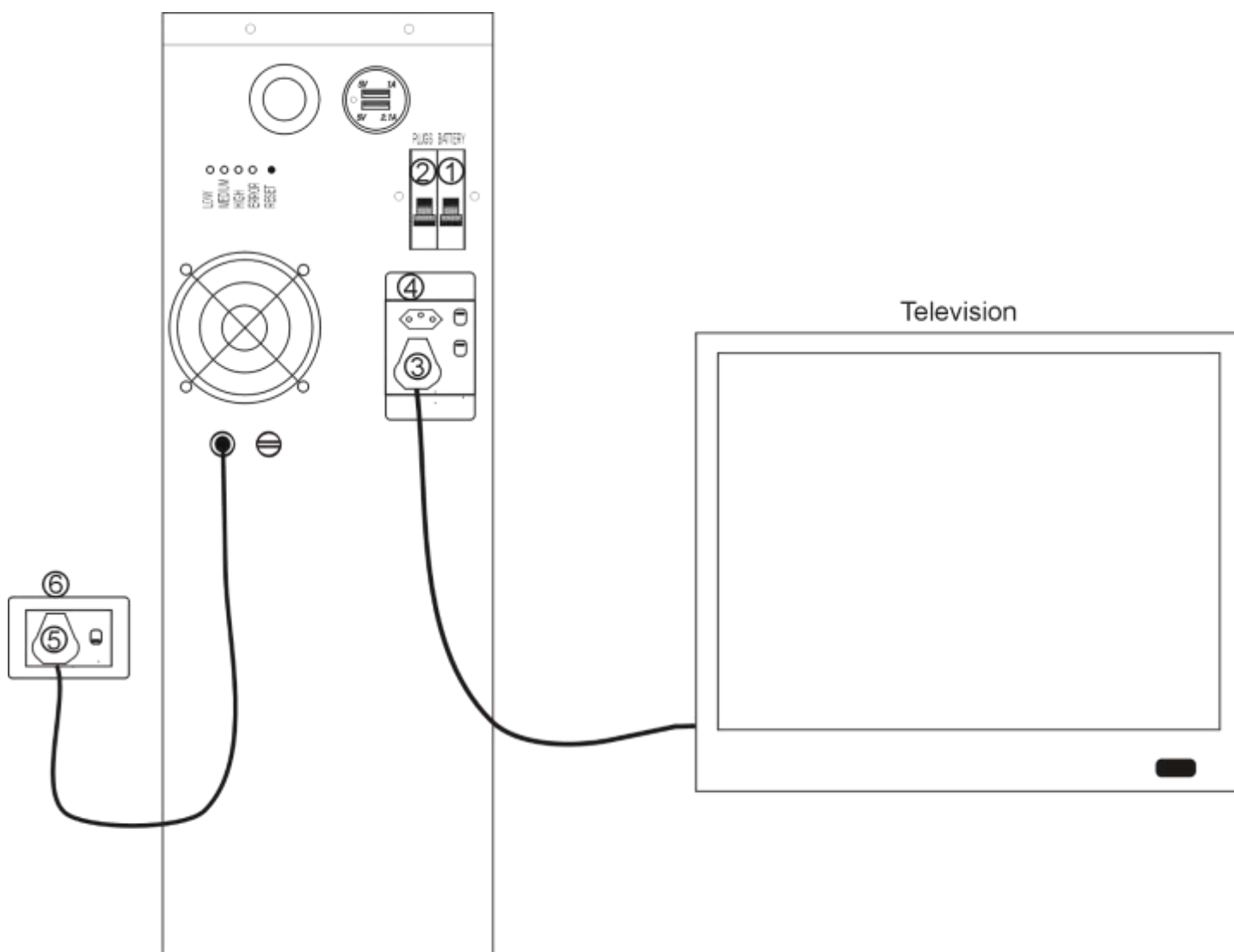
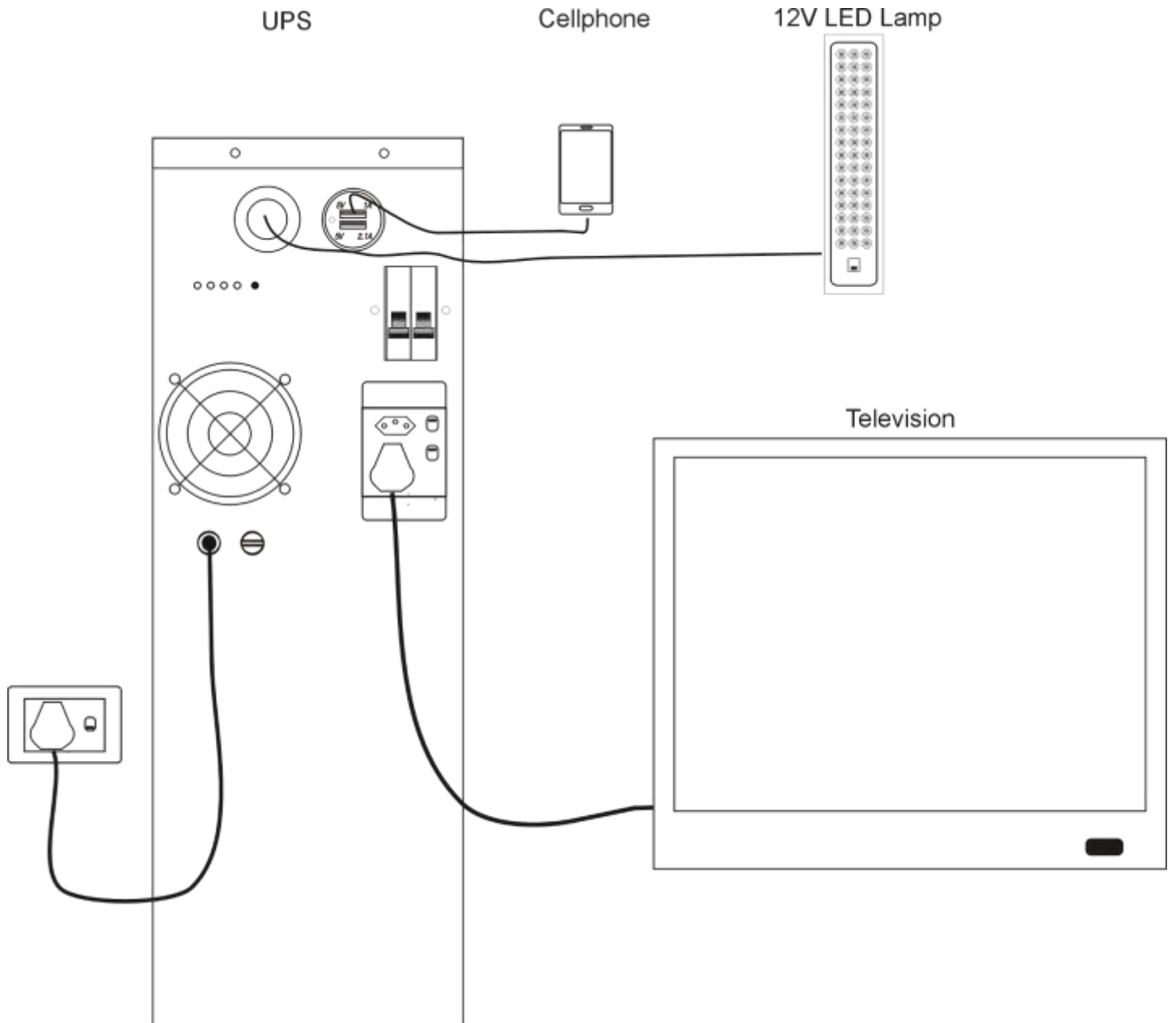
- Turn the Battery Circuit Breaker ① to the “ON” position .
- Turn the Plug Circuit Breaker ② to the “ON” position .
- Connect the device plug TV ③ “AC Load egg: TV” into the UPS plug socket ④ and switch the socket to the “ON” position.
- Switch the TV on and check if it is operating as normal.
- Connect the AC inlet plug ⑤ into the Wall Socket ⑥ and switch the wall socket to the “ON” position.

Fig 4-1



4.3 More Devices Connected



5. TROUBLE SHOOTING

The AC Circuit Breaker Trips	
UPS is overloaded	Reduce the load by unplugging some devices.
	Press the AC Circuit breaker button to reset the UPS

The DC Circuit Breaker Trips	
UPS is overloaded	Reduce the load by unplugging some devices
	Turn the DC circuit breaker to the on position

The red LED is solid on	
UPS is overloaded	Reduce the load and push the reset button for 3 seconds

Battery Not Charging	
Loadshedding	Wait until loadshedding is over
Wall socket switched off	Ensure the ups Inlet Plug is connected to the wall outlet socket and that the wall socket is switched on

If the UPS does not switch on, it is possibly caused by DC reverse polarity or short circuit.

- Disconnect all AC loads
- Unplug the AC inlet plug from the wall
- Switch off the battery circuit breaker

6. SPECIFICATIONS

	Model	600W 12V
OUTPUT	Output AC Voltage	230VAC
	AC Amps	2.6A
	Rated Power	600W
	Surge Power	800W
	Wave Form	Pure Sine
	AC Regulation	+/- 5%
	THD	< 3%
	Frequency	50Hz
INPUT	DC Voltage	12
	DC Amps Max	100A
	Voltage Range	11-14V
	Efficiency	80% Plus
	AC Circuit Breaker	3A
	DC Circuit Breaker	63A
PROTECTION	Overload	Auto Shutdown & Manual Restart
	Over/Under Voltage	Auto Shutdown
	Over Temperature	Auto Shutdown & Reset
	Output Short	Auto Shutdown & Manual Restart
	Cooling	Fan Cooled
ENVIRONMENT	Room Temp	20-40 °C
DIMENSIONS	(LxHxW)	41cmx51cmx18cm

7. LIMITED CARRY- IN WARRANTY

The following Warranty is conditional that the relevant Microcare product has been installed by an approved Microcare Installer, the required paperwork has been submitted to Microcare and that the Client is in receipt of our acknowledgement of this. Our products are innovative pieces of equipment and incorrect installation has been the overriding cause of failure in the past. No exception to this condition will be considered.

Microcare warrants its full range of products against defects in workmanship and materials, fair wear and tear accepted, for a period of three years (Inverters manufactured from the 1st July 2020 onwards carry a five-year warranty) from the date of collection for all equipment and is based on a carry-in basis. Where the installation of the product makes it impractical to carry-in to our workshops, Microcare reserves the right to charge for travel time and kilometres travelled to and from the site where the product is installed.

During this warranty period, Microcare will, at its own discretion, repair or replace the defective product free of charge. This warranty will be considered void if the unit has suffered any physical damage or alteration, either internally or externally, and does not cover damages arising from improper use such as, but not exclusive to:

- Reverse of battery polarity.
- Inadequate or incorrect connection of the product and/or of its accessories.
- Mechanical shock or deformation.
- Contact with liquid or oxidation by condensation.
- Use in an inappropriate environment (dust, corrosive vapour, humidity, high temperature, biological infestation)
- Breakage or damage due to lightning, surges, spikes or other electrical events.
- Connection terminals and screws destroyed or other damage such as overheating due to insufficient tightening of terminals.
- When considering any electronic breakage except due to lightning, reverse polarity, over-voltage, etc. the state of the internal control circuitry determines the warranty.

This warranty will not apply where the product has been misused, neglected, improperly installed, or repaired by anyone else than Microcare. In order to qualify for the warranty, the product must not be disassembled or modified. Repair or replacement are our sole remedies and Microcare shall not be liable for damages, whether direct, incidental, special, or consequential, even caused by negligence or fault. Microcare owns all parts removed from repaired products. Microcare uses new or re-conditioned parts made by various manufacturers in performing warranty repairs and building replacement products. Microcare repairs or replaces a part of a product; its warranty term is not extended. Removal of serial numbers may void the warranty.

All remedies and the measure for damages are limited to the above. Microcare shall in no event be liable for consequential, incidental, contingent or special damages, even if having been advised of the probability of such damages. Any and all other warranties expressed or implied arising by law, course of dealing, course of performance, usage of trade or otherwise, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited in duration to a period of three years (five years for Inverters manufactured from the 1st July 2020 onwards) from the date of purchase.

Life Support Policy

As a general policy, Microcare does not recommend the use of any of its products in life support applications where failure or malfunction of the Microcare product can be reasonably expected to cause failure of the life support device or to significantly affect its safety or effectiveness. Microcare does not recommend the use of any of its products in direct patient care. Microcare will not knowingly sell its products for use in such applications unless it receives in writing assurances satisfactory to Microcare that the risks of injury or damage have been minimised, the customer assumes all such risks, and the Liability of Microcare is adequately protected under the circumstances.

Caution

While all care is taken by us to dispatch goods with adequate packaging, Microcare is not responsible for any damaged caused to products after they have left our premises. Semi-sealed batteries have to be transported

upright and must not be put on their side. Please ensure that your transport company or delivery team is aware of the sensitivity of the products they are collecting.

Goods return policy

The following terms apply to returns of items purchased from Microcare, and we require the following information:

1. Details of the item(s) you would like to return.
2. Our invoice number.
3. The reason for the return.
4. Microcare must be notified within 7 days of your intention to return the goods which were purchased.
5. All items returned will be inspected prior to refund. If our technicians are not immediately available, the goods will have to be left with us until such time as a technician is available to check the items.
6. Proof of purchase is required for all returns.
7. The price paid by the customer is the price on which the refund is based.
8. Items purchased can be returned for a refund, replacement or exchange, provided proof of purchase is provided and subject to all other conditions as set down here.
9. All returns may be subject to an administration and handling fee of 10% of purchase price plus VAT.
10. Returns are based on a carry-in basis.
11. Returns will be refused in the following circumstances:
 - a. Where an item has been tampered with, altered or damaged in any way, or
 - b. Where a return is deemed unreasonable, this will be referred to management.

Severability

If a part of the terms and conditions set out above is held invalid, void, or unenforceable due to any particular national or international legislation, it shall not affect other parts of the terms and conditions remaining.

8. REGISTRATION OF MY MICROCARE PRODUCT

Product Serial Number:

Product Description:

Date Purchased

From Whom was the Inverter Purchased:

Company Name

Contact Person

Contact Number

E-mail Address

Installation Company Information:

Company Name

Contact Person

Contact Number

E-mail Address

Details of Product Owner

Name & Surname

Address

City & Province

Contact Number

E-mail Address

Date Installed

Microcare: 15 Swartkops Str, North End, Port Elizabeth
P.O. Box 7227, Newton Park, 6055
Tel: 041 453 5761, Fax: 041 – 453 5763
Technical Support e-mail: support@microcare.co.za
Website: www.microcare.co.za

Registration by fax: 041 – 453 5763

Registration by e-mail: support@microcare.co.za

Online Registration: www.microcare.co.za/register-my-product