

**POWERTECH**

MI5014

**12V/2000W**

**Pure Sine Wave Inverter  
Pro**



# Instruction Manual

Please read and save all instructions to ensure safe and effective use of this product.

**Thank you for purchasing this high-frequency pure sine wave inverter. This unit converts DC power from 12V battery to 230Vac with advanced features and functions:**

1. Pure sine wave output.
2. Switching time <30ms to ensure uninterrupted use of electrical appliances.
3. Low no-load power loss, low standby power loss, and low total harmonic distortion (<3%).
4. Input reverse connection/under-voltage/over-voltage protection, output overload/short circuit protection, over temperature protection.
5. Speed adjustable and silent fan based on load and temperature control.
6. RJ12 communication interface, support optional remote display.
7. Fitted with protective RCD (residual current device) switch to detect if there are signals of current leakage and protect the user from electrocution by automatically shutting off all output power in time.
8. MI5018 Optional remote control sold separately.

NOTE: Battery cables are not supplied

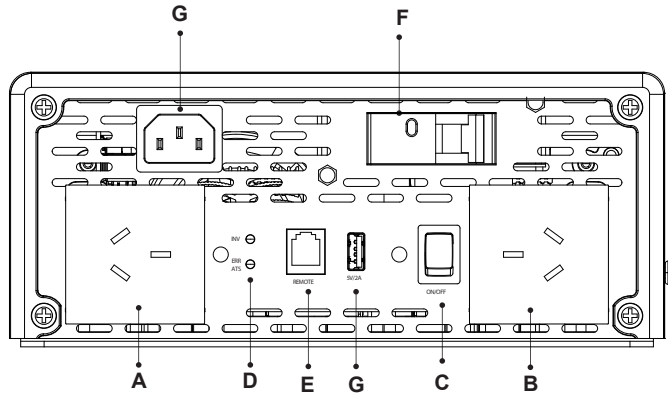
## **WARNINGS & CAUTIONS**

**Please read this manual carefully before using the inverter. Failure to follow these instructions may result in damage to the unit and could also result in serious injury to users. Always consult your licensed dealer/retailer for any repairs or spare parts services.**

1. Do not use under wet weather and the inverter is for indoor use only.
2. Do not place any objects on the inverter or battery.
3. The inverter and battery shall avoid direct sunlight, external heat source, corrosive chemicals, flammable fumes or gases.
4. Please ensure all ventilation vents and fan vents are not obstructed in any way.
5. Double check battery negative and positive posts before making any connection; a wrong connection (reverse polarity) will cause the fuses to blow and may damage the inverter.
6. Do not use substandard or damaged wiring with this inverter, it may cause fire or a shock hazard. Ensure that all the DC connections are tight.
7. A small spark (arc) can occur when making the final battery connection, this is most common when the inverter has not been used for some time. To minimize this, make the last connection quickly and completely.
8. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a battery.
9. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flush eye with running cold water for at least 20 minutes and get medical attention immediately.
10. For risk of electric shock: Do not attempt to open, disassemble or repair the inverter if damaged. Please keep away from children and pets to touch the inverter.

## PRODUCT OVERVIEW

### AC Output Side

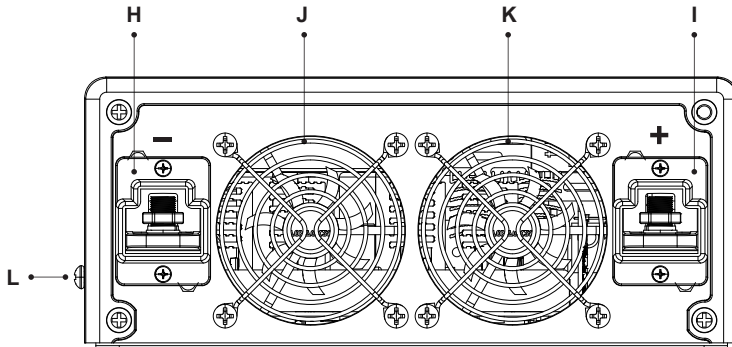


A: Standard AU Socket  
B: Standard AU Socket  
C: ON/OFF Switch

D: LED Indicators  
(INV, ERR/ATS)  
E: RJ12 Connector Port

F: RCD Protection  
G: AC INPUT

### DC Input Side:

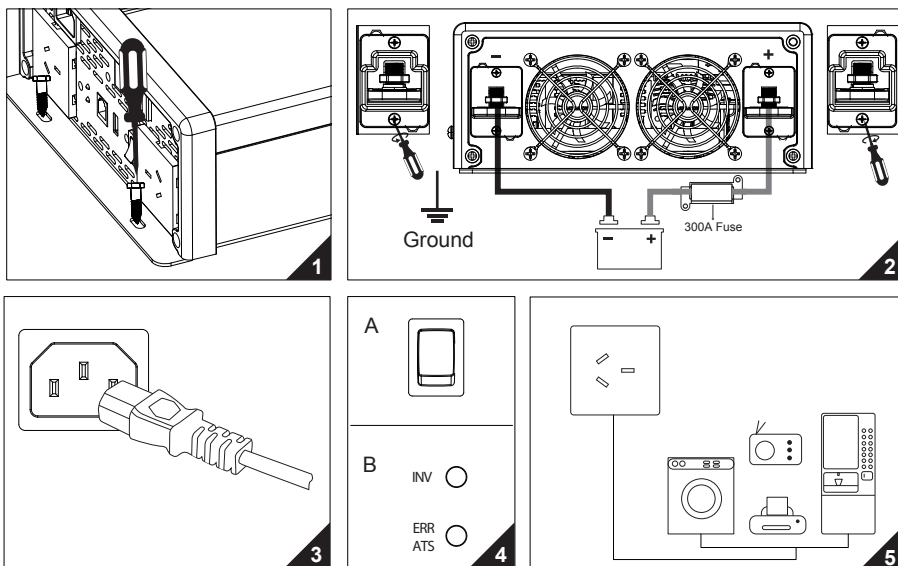


H: Negative Input Terminal  
I : Positive Input Terminal

J: Cooling Fan 1  
K: Cooling Fan 2

L: GND Terminal

## INSTALLATION STEPS



**Step.1:** Position screws into mounting holes to fix the inverter properly.

**Step.2:** Make sure the inverter switch is turned OFF. Then use battery DC input cables to connect inverter with battery. Double check battery negative and positive terminals before connection and ensure its tightness. For safety reason: (1) It is necessary to make your DC input cable (either negative or positive one) with a **250A fuse in series**. (2) And connect GND cable (not supplied) from inverter to vehicle chassis ground.

**Step.3:** If mains electricity is available, you can use ATS Input Cable to connect it with ATS Function Input Terminal on the inverter to enjoy uninterrupted use of electrical appliances.

**Step.4:** Turn on the inverter by ON-OFF switch, the INV LED lighting on. Plug your appliances into the socket. Now It is time to enjoy the output function!

**Note:** Please consult your local retailers/licensed distributors for getting proper size of DC input cables or AC transfer switch cable if you need to replace them.

## PRATICAL FEATURES OF POWER INVERTER

| Function                               | Details                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 230Vac<br>Pure Sine wave<br>Output     | <ul style="list-style-type: none"> <li>● When 10.5V to 15.5V input voltage is available:<br/>Turn on the ON/OFF switch, rated 230V pure sine wave will output in 5 seconds.</li> </ul>                                                                                                                                                                                                                                                   |
| ATS Mode<br>(AC Transfer Switch Input) | <ul style="list-style-type: none"> <li>● <b>When connecting the mains power to ATS Input Socket</b><br/>The inverter will detecting 230Vac/50Hz and the inverter AC load will be automatically supplied by the mains. The LED “ATS” will light on.</li> <li>● <b>But when improper mains voltage or frequency is detected:</b><br/>The inverter AC load will be supplied by the battery system. The max. switch time is 30ms.</li> </ul> |
| RCD Protection                         | When current leakage happens, RCD will automatically disconnect all output power sockets protecting the user from electrocution and the inverter from damage.                                                                                                                                                                                                                                                                            |
| Other Protection                       | <ul style="list-style-type: none"> <li>● Over-voltage and Low-voltage Protection</li> <li>● Reverse Polarity Protection</li> <li>● Output Short Circuit Protection</li> <li>● Over-temperature Protection</li> <li>● Over-load Protection</li> </ul> <p>See the below trouble-shooting for how these protection work.</p>                                                                                                                |

## LED INDICATION

**When inverter is normally running:**

| Inverter Condition | INV LED (Green) | ATS/ERR LED (Green / Red) |
|--------------------|-----------------|---------------------------|
| Switched-on        | FLASH           | GREEN FLASH               |
| Input from Battery | ON              | OFF                       |
| Input by ATS       | OFF             | GREEN ON                  |
| Over-loading       | ON              | RED FLASH                 |
| Switched-off       | OFF             | OFF                       |

**When inverter stops working caused by below faults:**

| INV LED (Green) | FAULT LED (Red)  | Faults                  | Cause                                                        |
|-----------------|------------------|-------------------------|--------------------------------------------------------------|
| OFF             | Flash once/5s    | Under/Over Voltage      | Vdc < 10.5V or Vdc > 15.5V.                                  |
| OFF             | Flash twice/5s   | AC Output Short Circuit | Electrical appliance may get damaged.                        |
| OFF             | Flash 3 times/5s | Over Temperature        | Cooling fan malfunction or ambient Temp. > 50°C              |
| OFF             | Flash 4 times/5s | Over Load               | Inverter is excessively over-loading by high-power appliance |
| OFF             | Flash 5 times/5s | Internal Fault          | Internal circuit may get damaged.                            |

**TROUBLE SHOOTING**

| Faults                  | Automatic or Manual Solutions                                                                                                                                                                          |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Under Voltage           | Inverter beeps and stops output, then detects the battery voltage: If voltage rises back over 12.0V, invrter will automatically resume output and working.                                             |
| Over Voltage            | Inverter beeps and stops output, then detects the battery voltage: If voltage drops back below 14.5V, invrter will automatically resume output and working.                                            |
| AC Output Short Circuit | Inverter beeps and stops output. Please unplug and check your appliance, then restart your inverter manually.                                                                                          |
| Over Temperature        | Inverter beeps and stops output. Please turn off the inverter and unplug your appliance. Leave the inverter for cooling and wait until the temp drops below 50°C, then restart your inverter manually. |
| Over Load               | Inverter beeps and stops output. Please unplug and check your appliance, then restart your inverter manually.                                                                                          |
| Internal Fault          | Try to restart your inverter several times. If the inverter still fails to work normally, please consult and send it back to your licensed dealer/retailer for any repairs or spare parts services.    |

**Note:** When any of this faults or other abnormalities happen, Do not attempt to open up the inverter or disassemble the unit. ASK FOR LICENCED PROFESSIONAL TO REPAIR THE INVERTER.

## SPECIFICATION

| Basic Specifications        |                                |
|-----------------------------|--------------------------------|
| Model                       | MI5014                         |
| Power                       | 2000W Continuous (4000W Surge) |
| DC Input                    | 10.5-15.5Vdc                   |
| AC Output                   | 220-230VAC, 50Hz               |
| Total Harmonic Distortion   | <3%                            |
| Efficiency                  | >89%                           |
| Working Temp                | -20 ~ 45°C                     |
| Battery Type                | STD, GEL, AGM, LiFePO4         |
| Inverter Size               | 437.6*226.8*98.4MM             |
| AC Transfer Switch Function |                                |
| Input Power                 | Max.2000W                      |
| Acceptable Voltage          | 230VAC                         |
| AC Transfer Switch Time     | <30ms                          |

## WARRANTY INFORMATION

Our product is guaranteed to be free from manufacturing defects for a period of 3 Years.

If your product becomes defective during this period, Electus Distribution will repair, replace, or refund where a product is faulty; or not fit for intended purpose.

This warranty will not cover modified product; misuse or abuse of the product contrary to user instructions or packaging label; change of mind and normal wear and tear.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and failure does not amount to a major failure.

To claim warranty, please contact the place of purchase. You will need to show receipt or other proof of purchase. Additional information may be required to process your claim.

Any expenses relating to the return of your product to the store will normally have to be paid by you.

The benefits to the customer given by this warranty are in addition to other rights and remedies of the Australian Consumer Law in relation to the goods or services to which this warranty relates.

This warranty is provided by:

Electus Distribution

Address 46 Eastern Creek Drive, Eastern Creek NSW 2766

Ph. 1300 738 555