



OWNER'S MANUAL

# PURE PRO



TEAMBMPRO.COM

# SAFETY PRECAUTIONS

Please read the Safety Precautions before installing or using the PurePro.

Be sure to observe all precautions without fail. Failure to observe these instructions properly may result in personal damage, or personal injury which depending on the circumstances may be serious and cause loss of life.



## WARNING



Do not use the PurePro in wet weather. The PurePro is designed for interior use only.



Keep the PurePro and the battery away from direct sunlight, external heat sources, corrosive chemicals, flammable fumes or gases.



Ensure all ventilation vents and fan vents are not obstructed in any way.



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 PurePro.



Do not use substandard or damaged wiring with the PurePro, as this may cause fire or a shock hazard. Ensure that all the DC connections are tight.



A small spark can occur when making the final battery connection, this is most common when the PurePro has not been used for some time. To minimize this, make the last connection quickly and completely.



Only connect 220-240V AC appliances to the PurePro that are in a safe condition.



Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a battery.



If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters the eye, immediately flush the eye with running cold water for at least 20 minutes and seek medical attention immediately.



Do not attempt to open, disassemble or repair the PurePro. Keep the PurePro away from children and pets.



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REV 2.0

First published 2024-10-02

Last updated 2025-02-12

Designed by BMPRO, one of Australia's leading power solution experts, the BMPRO product range is proudly designed and manufactured in Melbourne, Australia, and represent a high-quality product that will provide years of service.

**DISCLAIMER:** BMPRO accepts no liability for any loss or damage which may occur from the improper or unsafe use of its products. Warranty is only valid if the unit has not been modified or misused by the customer.

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# ABOUT THE PUREPRO

The PurePro is a pure sine wave inverter designed to allow you to access reliable AC power wherever you are.

Thanks to PurePro, RV travellers can enjoy comforts of 220-240V appliances and electrical devices, including air conditioning, microwave, hairdryer, power tools, laptops, coffee machines, CPAP machines, and more, when on the road and camping off grid.

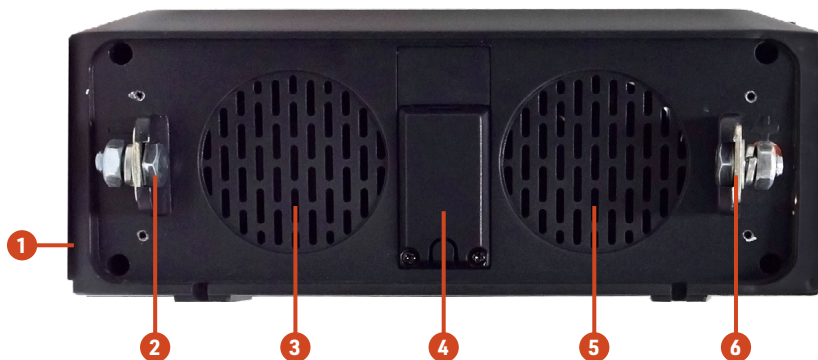
The PurePro inverter features a clear and easy to read LCD display showing all the vital information about your power usage at a glance.

## KEY FEATURES

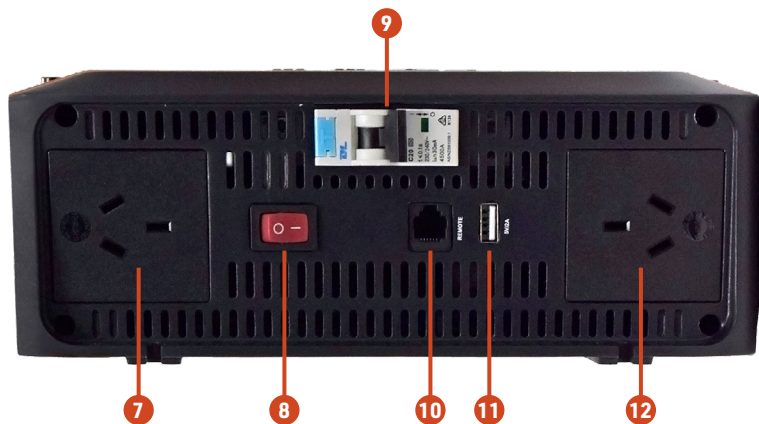
- ▣ Pure 240V sine wave output.
- ▣ Compatible with lead-acid and lithium batteries.
- ▣ Compatible with non-resistive loads, such as microwaves, washing machines and motors.
- ▣ <30ms switching time between mains power and battery power to ensure uninterrupted use of electrical appliances.
- ▣ High-efficiency amorphous magnetic core for stable and efficient operation.
- ▣ Low no-load power loss, low standby power loss, and low total harmonic distortion.
- ▣ High-definition LCD display for real-time monitoring and adjustment of parameters.
- ▣ Adjustable fan speed based on load and temperature control.
- ▣ Integrated RCD protection.
- ▣ Dual 240V AC outputs.
- ▣ Comprehensive protection: overtemperature, overvoltage, reverse polarity, short circuit and overload protection.
- ▣ Included remote switch.
- ▣ USB charging port able to supply power to small electronic devices.
- ▣ Designated earth connection.
- ▣ Tailored for high-end sensitive electronics.

# DESCRIPTION OF PARTS

## DC Input Side



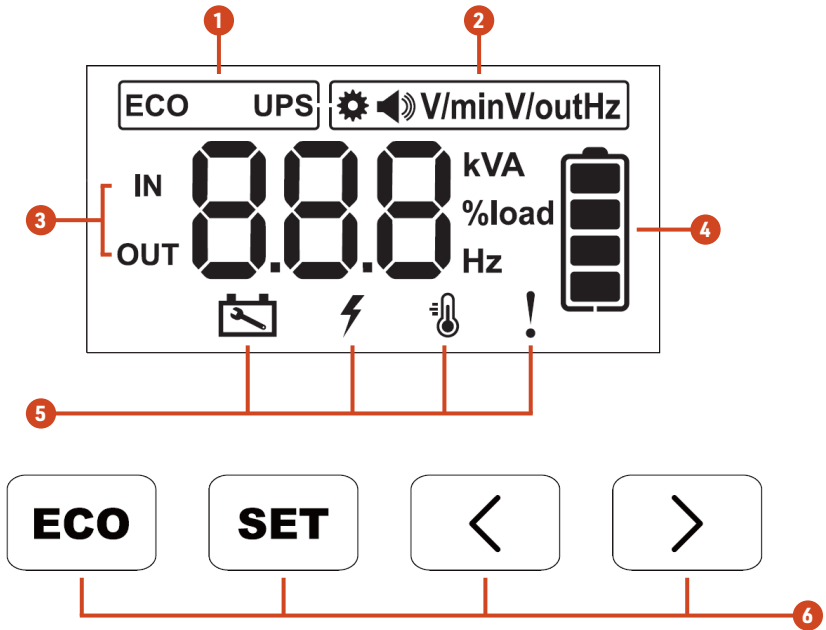
## AC Output Side



1. Chassis Ground
2. Negative Input Terminal
3. Cooling Fan 1
4. AC Transfer Switch Input
5. Cooling Fan 2
6. Positive Input Terminal

7. AC Socket 1
8. On/Off Switch
9. Residual Current Device
10. Remote Port
11. USB Port
12. AC Socket 2

## LCD SCREEN



1. ECO/UPS Functions
2. Setting Options
3. Parameters Display
4. Battery Status Indicator
5. Fault Icons
6. Button Control

## REMOTE



### 1. Fault Indicator

### 2. Power Indicator

### 3. Power Button

Hold the power button for 3 seconds to turn the PurePro on or off.

When the PurePro is on, a short press of the power button will enter sleep mode for the remote panel. The inverter will remain powered on.

### 4. Battery Voltage Status Indicator

LEDs show the approximate battery voltage of the connected battery in increments of 20%.

### 5. Load Status Indicator

LEDs show the approximate power of appliances connected to the PurePro in increments of 20%.

### 6. ECO Mode Button

ECO Mode reduces the power consumption from the batteries while the inverter is not supplying power.

### 7. UPS Mode Indicator

UPS mode is active when mains power is supplying the 240V outputs.

### 8. ECO Mode Indicator

# INSTALLING THE PUREPRO

Installation of the PurePro should only be carried out by suitably qualified personnel. Failure to install the PurePro correctly could result in bodily harm.

The installation location must be dry, clean and well ventilated. Ensure the fan is at least 30mm away from any surrounding objects.

MODEL	DC INPUT WIRE SIZE	DC INPUT FUSE	MAXIMUM LENGTH
PurePro2000	50mm <sup>2</sup>	250A	1500mm
PurePro3000	95mm <sup>2</sup>	350A	1500mm

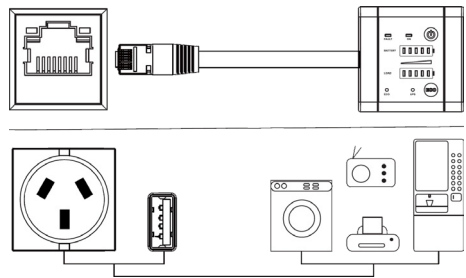
The DC input cable must be stranded.

It is recommended a disconnect switch is installed on the DC input cables with a rating the same or higher than the rating of the fuse.

The disconnect switch can be used to disconnect the DC input power between the inverter and the battery bank during maintenance or troubleshooting.

To install the PurePro:

1. Secure the PurePro in place using screws in the mounting holes.
2. Check the negative and positive terminals on the inverter before connecting to ensure the connection is tight.
3. Connect the PurePro to the battery, including the fuse, using the battery DC input cables (not supplied).
4. Connect a GND cable (not supplied) from the PurePro to the installation's earthing system at the switchboard. The ground wire should be a minimum 2.5mm<sup>2</sup> cross-sectional area, comprised of at least 7 strands, and have either green or green/yellow insulation.
5. Turn on the PurePro using the on/off switch.
6. Connect the remote control panel.





The PurePro is now installed and ready for use. You can connect your appliances to the AC output sockets and a USB cable to the USB output.

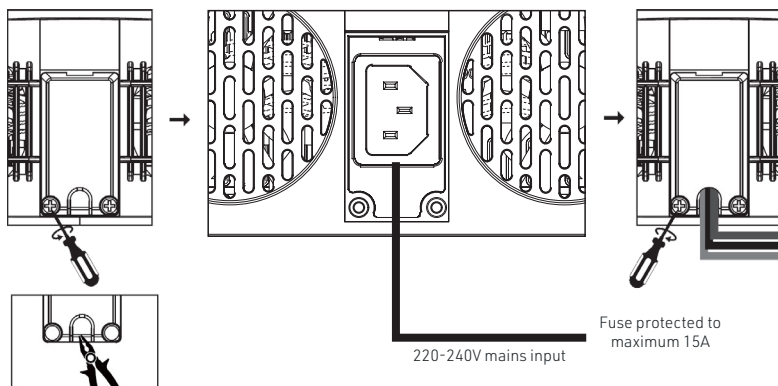
The **PurePro2000** has a maximum combined output of 2000VA. The **PurePro3000** has a maximum combined output of 3000VA.

### **WARNING**

If you are using the PurePro with a power management system, do not connect the 220-240V AC output to the power management system. 240V power for a power management system **CANNOT** be powered from the PurePro outputs.

## **AUTOMATIC TRANSFER SWITCH**

If mains electricity is available, you can connect it to the AC transfer switch input port on the PurePro using a cable with an IEC C14 (**PurePro2000**) or IEC C19 (**PurePro3000**) socket.



### **WARNING**

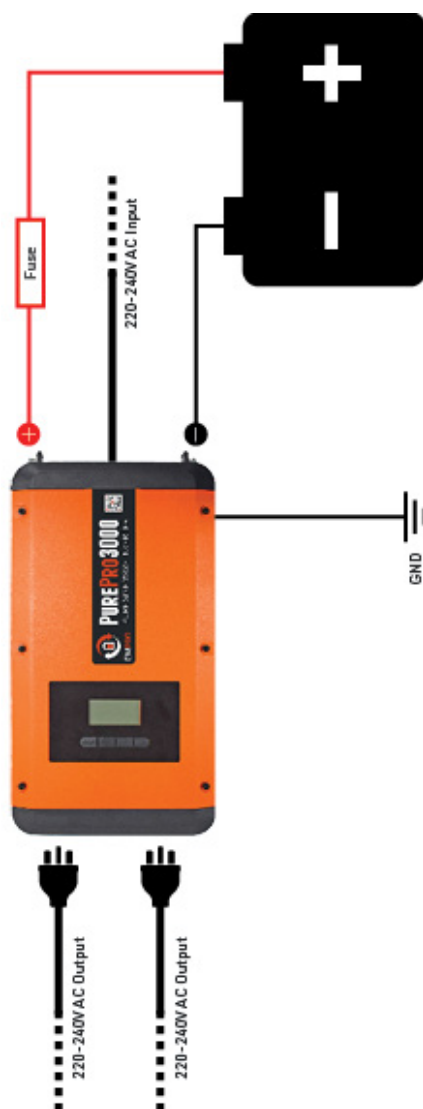
The supply for the ATS should be wired to a dedicated general power outlet for this purpose and not used for supply to other loads in the RV. Consult a qualified electrician for installation considerations.

When the AC Transfer Switch is activated and passing through AC power from the Mains Input connection, the AC supply must provide the safety device for the connected loads. Consult a qualified electrician for installation.

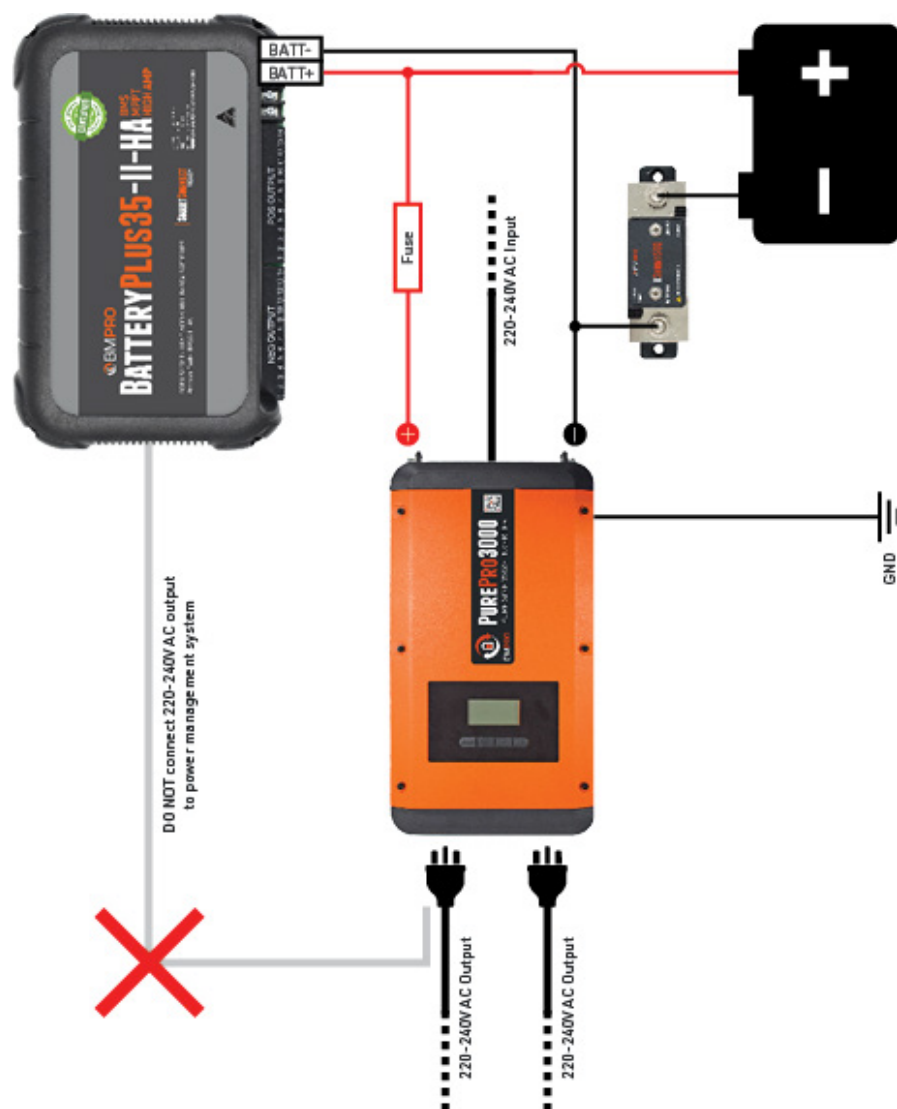
## **RCD SAFETY SWITCH**

The inclusion of an RCD complies with AS/ NZS 4763 Standards and allows it to be used to power fixed connections of transportable structures and vehicles as per AS/ NZS 3001 Standards, when installed by a licensed electrician.

## WIRING DIAGRAM

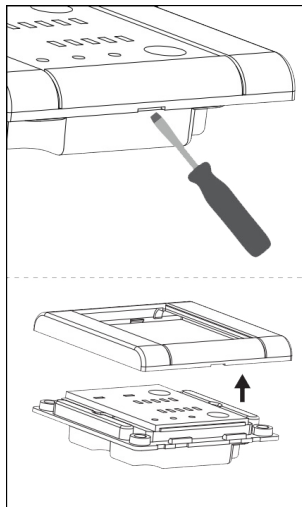


## WIRING DIAGRAM WITH POWER MANAGEMENT SYSTEM



## INSTALLING THE REMOTE

1. Use a screwdriver to separate the front plate of the remote from its main body.
2. Use the main body as a template to mark four screw holes with a pencil.
3. Pre-drill four screw holes on the mounting surface with a drill.
4. Connect one end of the RJ-type cable into the cable port on the remote.
5. Align the mounting holes on the corners of main body with the pre-drilled screw holes.
6. Fix the main body with included screws.
7. Re-attach the front plate to the main body.



8. Connect the other end of the included RJ-type cable into the remote port on the side of the PurePro.


# USING THE PUREPRO

To turn the PurePro on, use the On/Off switch. If a 10.5V to 15.5V DC input voltage is available, a 240V AC pure sine wave output will be active within 5 seconds.

This output is continuous until the PurePro is turned off or it loses its DC input.

## USING THE LCD SCREEN



The LCD screen is used to operate the PurePro.

- Use the  button to activate or exit ECO mode. When in ECO mode, the icon "ECO" is indicated on the LCD screen.

For more information, refer to the **ECO Mode** section.







- Use the  button to enter Settings mode.

For more information, refer to the **PurePro Settings** section.




- Use the   buttons to cycle between display modes.

The PurePro will display different information whether or not mains electricity is connected to the AC transfer switch input port.

If mains electricity is not connected to the AC transfer switch input port, the PurePro can display:

-  Output voltage frequency
-  Input voltage
-  Output voltage
-  Output current
-  Output power
-  Output load percentage

If mains electricity is connected to the AC transfer switch input port, the PurePro can display:








-  Output voltage
-  Output voltage frequency
-  Input voltage



## PUREPRO SETTINGS

The PurePro's settings allow you to configure the PurePro.

To access settings, press the  button. The LCD screen will show the .

There are three different settings which can be adjusted:

-    **Alarm:** Turn the PurePro fault alarm on or off.
-   **V/min:** Adjust the undervoltage protection values.
-   **V/out:** Adjust the output voltage value.

To save the adjusted values and exit settings mode, press and hold the  button until  disappears from the screen.

The PurePro will exit settings mode automatically after 30 seconds if no changes are made.

When the PurePro is in settings mode, the output will shut down. It will automatically recover when settings is exited.

## AC TRANSFER SWITCH INPUT

If you connect mains power to the AC Transfer Switch Input of the PurePro, it will detect if the voltage and frequency are within the range of 220-240V AC/50Hz.

If the mains voltage and frequency are within the proper range, the PurePro will automatically supply power to its AC load from the mains. The screen will display the "UPS" icon. If a remote is connected, the UPS Mode Indicator on the remote will turn on.

If the mains voltage or frequency is not within the proper range, the PurePro will supply power to its AC load from the battery system.

The maximum switch time is 30ms.

## ECO MODE

ECO Mode reduces the power consumption from the batteries while the inverter is not supplying power.

You can enter or exit ECO mode by pressing the ECO button on either the PurePro or the remote.






When ECO mode is on, the "ECO" icon will be displayed on the screen. If a remote is connected, the ECO Mode Indicator on the remote will turn on.

The PurePro will check the load by sending out pulses. If the load is less than 50W, the PurePro will stop outputting power and wait for the next pulse period.

If the load is 50W or more, the PurePro will start outputting power. It will continuously check the load to determine whether it should continue outputting power.

## PROTECTIVE FEATURES

The PurePro has several protective features:





-  Overvoltage and undervoltage protection
-  Reverse polarity protection
-  Output short-circuit protection
-  Over-temperature protection
-  Overload protection

For more information on these protective features, refer to the **Fault Indicators** section.

## FAULT INDICATORS

If a fault is indicated on the PurePro, there will be an alarm sound, output will stop and a fault icon will be displayed on the LCD screen.

If a remote is connected, the Fault Indicator LED will flash. The type of fault is indicated by the number of Load Status Indicator LEDs that are on.

LED SCREEN ICON	REMOTE LED SEQUENCE	FAULT	SOLUTION
F01 	1 Load LED	Input over/undervoltage Input voltage is >15.5V or <10.5V	The PurePro will detect voltage to check if it has reached threshold voltage for automatic recovery.  If there was an overvoltage event, the PurePro will automatically recover when voltage reaches <14.5V.  If there was an undervoltage event, the PurePro will automatically recover when voltage reaches >12.0V for 5 minutes, or when the on/off button is cycled.
F02 	2 Load LEDs	AC output short-circuit	Unplug and check the connected appliances, then restart the PurePro manually.
F03 	3 Load LEDs	Overtemperature Fans have malfunctioned or temperature is >60°C	Turn off the PurePro and unplug connected appliances.  Let the PurePro cool until its temperature is below 60°C, then restart the PurePro manually.
F04 	4 Load LEDs	Overload	Unplug and check the connected appliances, then restart your the PurePro manually.
F05	5 Load LEDs	Internal fault	Restart the PurePro. If the PurePro still fails to work after several attempts, contact BMPRO.

# FAQS AND TROUBLESHOOTING

## Need more help troubleshooting your PurePro?

Contact our customer service team online at [teambmpro.com/technical-support](https://teambmpro.com/technical-support)

## My PurePro does not appear to be working?

The PurePro can be affected by outside interference.

The PurePro is affected by strong electromagnetic waves, such as nearby motors, power inverters, strong magnetic fields, etc.

Ensure your PurePro is kept away from these sources.

## Why is my PurePro making a buzzing noise?

The PurePro may make a buzzing noise when a protective feature is triggered.

For troubleshooting information, refer to the **Fault Indicators** section.

## Why am I getting a low/high voltage alarm?

A low/high voltage condition could occur if:

- ▣ The battery is out of power and needs to be charged.
- ▣ Terminal contact is poor. Clean the terminals with a dry cloth.
- ▣ There is a large load drawing down the voltage from the battery. A high voltage condition could occur if there is a charging source on the battery which is outputting a high current.

## Why does my PurePro have no output?

If the PurePro has no output, check the following:

- ▣ The battery voltage is too low. Recharge or replace the battery.
- ▣ The load current is too high, and part of the load is turned off to restart the inverter. Reduce the load current into the PurePro.
- ▣ The PurePro is overheated and is undergoing thermal protection. Allow the PurePro to cool for a while and place it in a well-ventilated area.
- ▣ The terminals are reversed. Connect the positives and negatives to the correct DC terminals.
- ▣ The RCD has detected earth leakage and has disconnected the loads.



### **Why isn't the PurePro switching to mains supply when mains input is available?**

If the PurePro doesn't appear to be switching to mains input, check the following:

- ☐ The mains input cable is connected properly and is in good condition.
- ☐ The mains input voltage or frequency is within the acceptable range.

### **Why isn't the PurePro running one of my appliances?**

If there is a load that the PurePro won't run, it could be due to the appliance having a high inrush current.

There are three types of loads:

- ☐ Resistive loads, which always draw constant power and so are easy to power from the PurePro.

Resistive loads are usually appliances that generate heat such as toasters, ovens, space heaters, and coffee makers.

- ☐ Inductive loads, which have a high inrush current each time they start, which can prevent them being powered by the PurePro.

Inductive loads provide power to electric motors. Examples include moving parts, fans, vacuum cleaners, dishwashers, washing machines, compressors in refrigerators and air conditioners.

- ☐ Capacitive loads, which may have a high inrush current if they have not been powered for some time. These loads may be able to be powered from the PurePro if they are connected to mains power shortly before use in order to charge the capacitor.

Examples of capacitive loads include TVs, microwave ovens, freezers, dishwashers, and air conditioners.

# SPECIFICATIONS

SPECIFICATION	PUREPRO2000	PUREPRO3000
Power	Continuous: >2000VA (>2000W)  Peak Power: 4000VA (4000W)	Continuous: >3000VA (>3000W)  Peak Power: 6000VA (6000W)
DC Input	12VDC (10.5-15.5V)	
AC Output	220-240VAC, 50Hz, 8.33A	220-240VAC, 50Hz, 12.5A
USB Output	USB-A 5VDC/2A	
No Load Current	Normal <1.7A, ECO <0.35A	Normal <2A, ECO <0.35A
Total Harmonic Distortion	<3%	
Efficiency	>89%	
AC Transfer Switch Input Power	2300W (10A)	3000W (16A)
AC Transfer Switch Acceptable Voltage	200-260VAC	
AC Transfer Switch Time	<30ms	
Temperature	0-50°C	
IP Rating	IP22	
Battery Type	STD, GEL, AGM, LiFePO4	
Dimensions	428x253x94mm	520x265x101mm
Weight	4.8kg	5.5kg

The Automatic Transfer Switch is certified to IEC61810-1 and can be used as the isolation between sources in compliance with clause 2.7.7.2 of AS/NZS3001.2:2022

REMOTE	
Input Voltage Range	7-18VDC
Working Current	10mA
Shutdown Current	8mA
Sleeping Current	9mA
Cable	RJ12 interface, 5m
Temperature	0-50°C
Dimensions	86x86x22.5mm
Weight	70g
IP Rating	IP22

# WARRANTY TERMS AND CONDITIONS

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 the failure does not amount to a major failure.

This warranty is provided by SETEC BMPRO Pty Ltd (ABN) ("BMPRO") for its products. Warranty benefits are applied along with any rights and remedies required by Australian State and Federal legislation that cannot be excluded. No part of this warranty excludes, restricts or modifies any State or Federal legislation relating to the supply of goods and services which cannot be excluded, restricted or modified.

## WARRANTY

BMPRO warrants that the product will be free from any faults in materials and workmanship beginning from the original date of purchase under standard application, installation, use and service conditions, subject to the exclusions and limitations detailed below. The warranty period of the product is two years.

If, before the warranty period has ended, a fault occurs with the product and BMPRO finds the product is defective in materials or workmanship, BMPRO at its discretion will subject to further rights accorded by the Australian Consumer Law to either:

- Repair the defective product
- Replace the defective product
- Provide a refund to the purchaser for the price paid at purchase for the defective product.

## WARRANTY CLAIMS

Refer to your manual before using the product. Most BMPRO products are designed to be installed by a suitably qualified installer. The products should be carefully inspected by you or your installer before installation for any visible manufacturing faults. If a product has been installed incorrectly, BMPRO accepts no responsibility on top of our consumer guarantee obligations.

1. If a fault covered by warranty occurs, the purchaser must either contact the dealer where the product was purchased within 7 days, or BMPRO at the contact details listed.
2. All warranty claims must include: (a) proof of purchase of the product; (b) complete details of the alleged fault; (c) any relevant documentation related to the fault (such as photographs or maintenance records); (d) return material authorisation (RMA) number.
3. The product must be made available to BMPRO or its authorised installer for inspection and testing within 14 days of contacting BMPRO or the dealer.
4. The reasonable cost of delivery and installation of any products or components of products that have been repaired or replaced to the place of purchase notified to BMPRO is covered by the warranty provided by BMPRO, along with the reasonable costs of removal and return of any products determined by BMPRO to be defective.
5. If, on return to BMPRO or on investigation by BMPRO, inspection and testing determines there is no fault in the product, the purchaser must pay BMPRO's reasonable costs of testing and investigating the product, as well as transportation and shipping costs.

## REGISTER A WARRANTY OR REPAIR WITH BMPRO

To register a warranty or repair with BMPRO:

1. Lodge a support request via [teambmpro.com/technical-support](https://teambmpro.com/technical-support) or email [customerservice@teambmpro.com](mailto:customerservice@teambmpro.com)
2. If agreed with the BMPRO Product Specialist team, register a warranty claim or repair via [teambmpro.com/warranty-claim](https://teambmpro.com/warranty-claim) or email [customerservice@teambmpro.com](mailto:customerservice@teambmpro.com) to obtain a Return Material Authorisation (RMA) number.
3. Package and send the product to:

BMPRO Warranty Department  
19 Henderson Road  
Knoxfield, VIC 3180

Please mark RMA details on the outside of the packaging.

4. Ensure your package also includes a copy of the proof of purchase, a complete description of the fault and your contact details including phone number and return address.

## EXCLUSIONS

This warranty will not be applicable where: (a) the product has been altered, modified or repaired by someone other than BMPRO, an authorised installer or a qualified auto electrician; (b) the product has not been installed properly by either the user or manufacturer; (c) BMPRO cannot establish a fault in the product after inspection and testing; (d) the product has been used for purposes other than that for which it was designed; (e) the fault in the product has occurred due to a failure by the purchaser to ensure proper use and maintenance of the product according to BMPRO's instructions, recommendations and specifications (including maintenance); (f) the product has been subjected to abnormal conditions, such as environmental, temperature, water, fire, humidity, pressure, stress or similar; (g) the fault has been caused by abuse, misuse, neglect or accident; (h) the fault has been caused by a power surge or other kind of fault in the supply of electricity; (i) unauthorised parts or accessories have been used on or in relation to the product; (j) the appearance of the Product has deteriorated; or (k) the fault is a result of common wear & tear.

## LIMITATIONS

No express warranties or representations are made by BMPRO other than what is set out in this warranty. The absolute limit of BMPRO's liability under this express warranty is the repair or replacement of the product or part of the product.

## CONTACT

BMPRO's contact details for warranty claims are:

SETEC BMPRO Pty Ltd  
19 Henderson Road,  
Knoxfield, VIC 3180  
Phone: (03) 9763 0962  
Email: [customerservice@teambmpro.com](mailto:customerservice@teambmpro.com)

Warranty Claim and Product Repair Form:  
<https://teambmpro.com/warranty-claim/>

Registering your BMPRO product is an important step to ensure that you receive all the benefits you are entitled to.

Please complete the online registration form at <https://teambmpro.com/product-registration/> for your new product today.





**POWERING YOUR ADVENTURES.**



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