



AGM DEEP CYCLE BATTERY

VABY003A

USER MANUAL



ABOUT US

ATEM POWER, born in June, 2017, as a synonym for exciting outdoor experience, is an Australian company with dedication and passion for the R&D of high quality products in the field of renewable energy products, batteries and related accessories.

Since the company was founded, we have committed to innovation that aims to make your life infinitely more convenient. And the belief in our conviction for quality and commitment allows us to innovate in developing products that are optimally tailored to the needs of our amazing customers.

We engineer and supply solar products for homes, 4x4s, recreational vehicles and virtually any application you can think of. And we also develop reliable, high performing deep-cycled batteries and lithium batteries for standby or daily power needs. Accessories include battery chargers and inverters that are ideal for RV's, commercial vehicles, boats, yachts and many more applications!

At ATEM POWER, we stay true to our DNA by prioritizing technological innovation designed to improve our products and striving to provide excellent customer care. Because we are motivated to explore the limits of solar power!

BATTERY SAFETY WARNINGS

- Always wear appropriate clothing, insulating gloves and goggles.
- Use insulated tools when making battery connections.
- Remove any metallic items such as watches, bracelets and other personal jewelry to ensure safe installation.
- A short circuit has the potential to cause fire or the explosion of the battery, even burns to the operator / technician.
- The contents of the lead-acid battery is very corrosive. Any direct contact with skin or eyes can result in burns and blindness.
- Keep the battery out of the reach of children at all times.
- Keep the battery out of direct sunlight, away from sparks, flames, heat sources and metal objects.
- Ensure the cable connections to the terminals are properly tightened.
- The battery is heavy in nature - use the correct lifting procedure below.
 1. Do not lift a heavy battery alone - ask for help from a co-worker or use a lifting device, and wear appropriate protecting clothing (lab coat, smock or apron).
 2. Get your body as close as possible to the battery, and bend your knees slightly before lifting or lowering it.
 3. Use the strap to lift the battery and carry it close at the centre of your body.
 4. When carrying the battery, do not twist or tilt it.
- Always store in a safe place, preferably in a plastic tray.
- Do not lay objects on top of battery.

FIRST AID

- Immediately rinse eyes with water or milk if they come into contact with acid mix, then seek medical advice without delay.
- If contact with skin occurs, wash off with water and mild soap at earliest opportunity. Clothes should be washed the same way and rinsed thoroughly.

BATTERY ORIENTATION

The battery should be placed and installed upright ONLY. Do not place or install it upside down or on their sides.

INSTALLATION

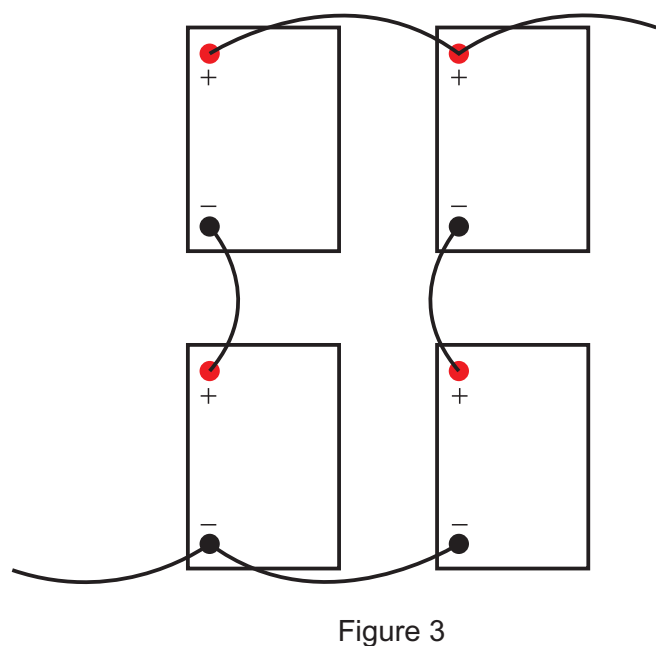
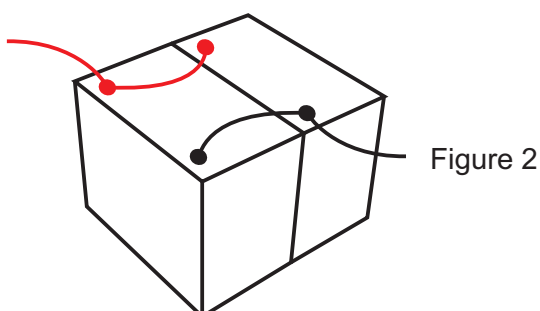
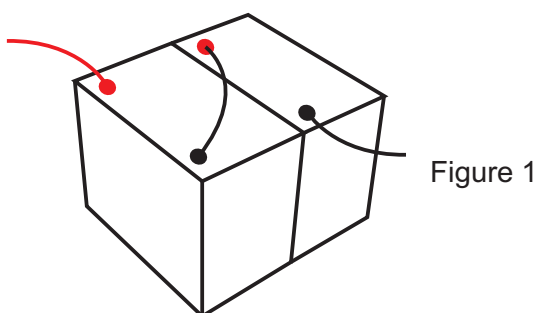
- The battery is normally ready to install right out of the box! Measure the battery voltage; if it is 12.8 volts or greater, install; if less, then refer to the charging section.
- Series & Parallel Connection

By connecting multiple batteries of the same make/model/capacity in series, parallel or series parallel configurations, output voltage or battery amperage may be increased as needed.

1.To increase voltage, batteries are connected in series as shown in Figure 1.

2.To increase the available amount of current and capacity, batteries are connected in parallel as shown in Figure 2.

3.To increase capacity and voltage, connect the batteries in series parallel as shown in Figure 3.



CLEANING

- Only use a damp cloth with mild soap to clean the battery case, only clean terminals when the battery is removed from vehicle and avoid shorting terminals with the brush.

STORAGE

- Fully charge the battery before storage.
- Store in a cool, dry location, protected from the elements.
- Check cabling for broken or frayed cables.
- The battery self-discharges during storage. Monitor the voltage every 3 months if possible. Recharge the battery every 6 months.
- In high temperatures (greater than 95°F or 35°C) monitor the voltage every 1 month if possible, as the battery will self-discharge faster. Recharge the battery every 3 months.
- The stored battery should be given a boost charge when they are at or less than 12.8 volts. Before charging in 10A current for 3 hours, please discharge in 10A current for 1 hour to activate the battery.
- After storage, recharge before use.

MAINTENANCE

- Keep the area around the battery clean and dry.
- Inspect the battery at regular intervals. The top of the battery and terminal connections should be clean, dry, and free of dirt or corrosion.
- AGM batteries do not have free flowing electrolyte or removable vents and lose very little water during charging. Because of their construction, AGM batteries are considered non-spillable and maintenance free since no watering is required.

CHARGING

- Proper charging will maximize battery performance.
- Recharge your battery as soon as possible after use. You can hamper your battery's recharge acceptance and ultimately its performance by allowing it to sit discharged for several days.
- Always charge the battery in a well-ventilated area.
- Avoid charging at temperatures above 104°F (40°C).
- The charger cabling should be insulated and free of breaks or cuts.
- The cable connectors should be clean and properly mated with the battery terminals to ensure a snug connection.
- Do not discharge your battery more than 80% to prevent over-discharging and damaging the battery's internal components.
- Both under and over-charging can reduce the life of the battery.
- Make sure your charger is designed for a 12 volt battery and the charging current is no more than 30A.
- Always monitor your battery when charging, whether your charger is automatic or not.
- If the battery casing feels hot, disconnect the charger immediately, move the battery to a cooler environment and let it cool down before recharge.
- Never connect your battery directly (without a regulator) to a solar panel. This can cause irreversible damage to your battery.

EQUALIZING

- Do not equalize AGM deep-cycle batteries. Permanent damage to the battery will occur.

DISPOSAL

- Always dispose of scrap batteries at an accredited collection station.
- Never place the battery with household waste.
- If the casing is damaged, place it into a plastic collection tray to contain leaking acid prior to disposal (enquire regarding local regulations).

PACKAGE LIST

- 1 PC(s) ATEM POWER AGM Deep Cycle Battery.

TECHNICAL SPECIFICATION

Model	VABY003A
Package Dimension:	14.96"L (38cm) x 8.66"W (22cm) x 11.81"H (30cm)
Product Dimension:	12.99"L (33cm) x 6.69"W (17cm) x 8.46"H (21.5cm)
Gross Weight:	65.48 pounds (29.7kg)
Net Weight:	62.61 pounds (28.4kg)
Rated Capacity (10 hour rate):	135Ah
Voltage:	12V
Nominal Voltage:	12V
Number of Cells:	6
Float Charge Voltage:	13.5 - 13.8V at 25°C (77°F)
Cycle Charge (Constant Voltage):	Initial Charging Current < 25A Voltage 14.4-15.0V at 25°C (77°F)
Max Initial Current:	Less than 40.5A
Max Charge Current:	30A
Max Discharge Current:	600A (5s) at 25°C (77°F)
Self-Discharge Capacity:	3 Months = 91% >6 Months = 82% >12 Months = 64% Capacity Affected By Temperature: 40°C = 102% 25°C = 100% 0°C = 85% -15°C = 65
Charging Temperature Range:	32°F(0°C)~104°F(40°C)
Discharging Temperature Range:	5°F(-15°C)~113°F(45°C)
Storage Temperature Range:	5°F(-15°C)~104°F(40°C)
Temperature Compensation (mV/°C):	-5mV/°C for Cycle Use; -2mV/°C for Standby Use
Internal Resistance:	Approx. 6.0mΩ
Material:	ABS Intrusion-Safe Body
Terminal Bolt Size:	M8x3x18mm
Recommended Terminal Torque:	3.9~5.4 N*m(34.39~47.75 in*lbs)

TROUBLESHOOTING

If any problems occur during battery operation, please refer to the following instructions for assistance.

The battery voltage is too low to reliably power loads.

- Please charge the battery as soon as possible.

Battery case has deformed.

- Deformation may be due to over-charging or over-discharging the battery. The charge current should be no more than 30A.

Too high of a current passes through the battery and causes battery failure.

- Please disconnect the load until the battery resumes normal operation.

The battery temperature is too high or too low.

- Please cut off all connections, move the battery to a cooler environment and let it stand by until it cools down or warms up to room temperature.

Capacity of the battery has decreased.

- Verify the temperature. If near 104°F (40°C), please cut off all connections and let the battery cool down.
- Capacity loss may be due to over-discharging the battery. Please charge the battery AS SOON AS POSSIBLE.



WARRANTY



WARRANTY PERIOD:

ATEM POWER warrants that each of our AGM deep cycle battery that is purchased while this Warranty is in effect will be free from defective workmanship and materials for a period of 1 year.

CONDITIONS:

1. The battery selected by the user must be of the correct size, design, and capacity for the intended application. Failure to do this will invalidate the warranty.
2. The batteries should be paired with a suitable charger, which is not included in the package. Incorrect selection of charger and/or failure to follow the correct charging will void the warranty.
3. The user must follow recommendations for series and parallel installations, and it is recommended that the user or reseller contact applications engineering for guidance. The warranty shall be voided if these actions do not take place or if the user does not properly maintain the string as recommended in the installation guides.
4. Installation of the batteries must be performed by suitably qualified technicians and in accordance with proven acceptable practices or the warranty will be voided.
5. Dismantling and moving batteries to a different location will void the warranty unless dealer is contacted and provides written consent of such action.
6. The warranty shall be voided if the battery becomes unserviceable due to fire, freezing, misuse, abuse, neglect, physical damage or any act of nature.
7. Non-compliance with operating instructions, repairs made with other than original parts, or repairs made without authorization render the warranty void.
8. This warranty shall apply only to original purchasers. It is not transferable.

CLAIMS:

1. Contact the original point of purchase for instructions.
2. Request return authorization. No returns will be credited without an authorization.
3. In the case of returned products, the batteries must be packed with enough padding and in the appropriate cartons to eliminate the risk of damage in transit.
4. ATEM POWER has the option to credit or replace products deemed defective and under warranty.
ATEM POWER shall not be liable for indirect, accidental or consequential damages arising out of the sale or relating to the use of this product. The end user assumes all responsibility for any and all personal injury and property damage resulting from the use, maintenance, transportation or installation of the product. The liability to us for any and all claims shall not exceed the purchase price of the battery.

This limited warranty is in lieu of, and manufacturer disclaims and excludes, all other express warranties. Manufacturer further limits the duration of all, whether statutory, express or implied warranties, including, without limitation, any warranty of merchantability or fitness for a particular purpose, to the warranty period. Manufacturer's exclusive liability for breach of any warranty on the Battery shall be to replace the Battery within the warranty period in accordance with the terms of this limited warranty. In no event shall Manufacturer be liable for any loss or damages of any other kind, whether direct, incidental, consequential including lost profits, exemplary, special or otherwise, including any lost profits or removal, shipping, or installation expenses.



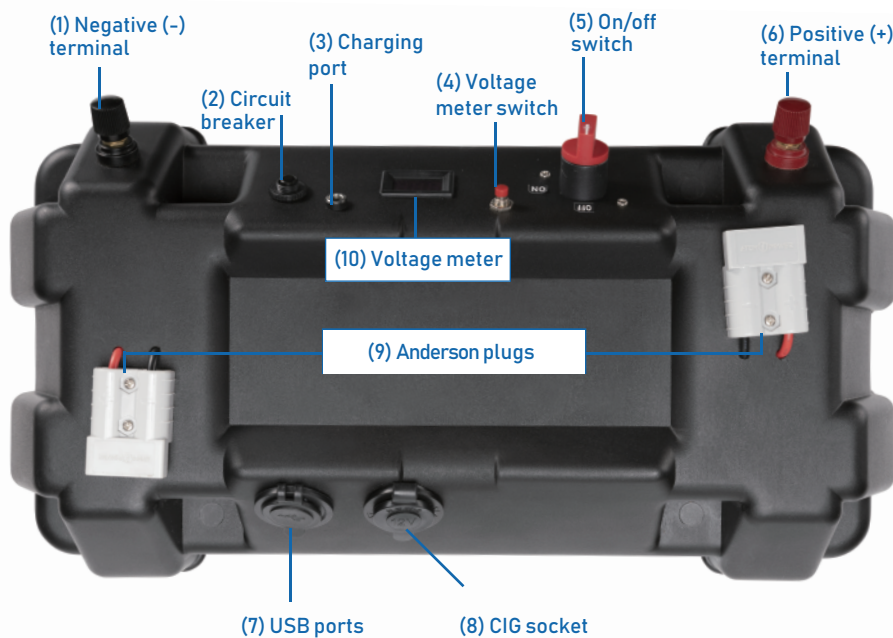
Battery Box

USER MANUAL



ATEM POWER, born in June, 2017, as a synonym for exciting outdoor experience, is an Australian company that specializes in solar power kits & equipment. Through 3 years of steady development, ATEM POWER has successfully secured a place in the field of solar products, possessing premium solar products, including solar panel, solar cell, charger, inverter and automotive cell, etc, which have greatly changed people's life-style and become an indispensable part of their daily life. At ATEM POWER, we stay true to our DNA by prioritizing technological innovations designed to improve our products and striving to provide excellent customer care. Because we are motivated to explore the limits of solar power!

ILLUSTRATION:

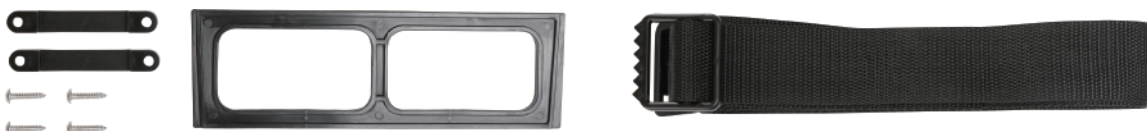


- (2)Circuit Breaker: 10A
- (3)Charging port: 12V
- (7)5V USB Ports: 1A/2.1A
- (8)CIG Socket: 12V
- (9)Anderson Plugs: 50A

DIMENSION:



PACKAGE LIST:



WARNING AND SAFETY PRECAUTION:

1. The user must read and understand all of the warning and safety messages supplied with your product prior to installation or use.
2. Do not use or store the battery box near heat sources such as fire or heaters or expose it to flammable chemicals or vapors.
3. Do not strike, throw the battery box.
4. Never connect positive (red) and negative (black) terminals of the box together, and do not short-circuit the positive and negative terminals of the battery with wires or other metal objects.
5. Please ensure the strap is tight when moving your battery box.
6. Children or adults under the influence of drugs or alcohol are not allowed to use the battery box.
7. Please note that this battery box is not waterproof.
8. Please note that the battery is not included in this purchase.
9. While working on the battery box please wear protective eyeglasses and clothing. Please wear insulating gloves and provide necessary protection. Do not wear any metallic items such as watches, bracelets, etc.
10. Please do not disassemble the box as such action will not only cause potential damage to you and your box, but also void the warranty.
11. This battery box is only suitable for batteries with dimensions up to 39.3cm*18.3cm*21.5cm.

INSTALLATION INSTRUCTIONS:

- Step 1: Remove the lid, then put your battery inside the box.
- Step 2: Adjust the internal bracket to suit your battery (optional).
- Step 3: Attach the positive (red) and negative (black) wires from the box lid to their respective terminals on the battery.
- Step 4: Replace the lid, then fasten the buckle and tighten the strap.



MAINTENANCE:

1. Please keep the inner of the box clean and dry.
2. Please cover USB port, CIG socket with rubber plug to prevent potential damage.
3. Always keep the external terminals clean.



WARRANTY:



WARRANTY PERIOD:

Full 24 month warranty from date of purchase against all manufacturing defects.

WHAT DOES THE WARRANTY COVER?

Under normal usage conditions, this warranty covers:

1. Any manufacturing defects in materials, designs and workmanship encountered in normal and non-commercial use of this product.
 2. We will either repair or replace the product at our discretion provide that the fault is found to have been caused by a design or manufacturing defect and not misuse or tampering.
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THE WARRANTY DOES NOT COVER:

1. Damage that occurs in shipment and delivery.
2. Incorrect installation, or unauthorized disassembling and modification of the box.
3. Cost of removing and re-installing the product; travel and /or other expenses due to customer's location
4. It is your responsibility to deliver and pick up your product, including any costs associated with the postage of repairing or replacing your product. If you want to send the product back we advise you insure against loss or damage.
5. Any loss directly or indirectly associated with the product that fails to operate.
6. Damages due to incorrect operation, accidents, abusive use, neglect, insects, animals, fire, adverse weather, water, lightning or other acts of nature.
7. Damages due to use of equipment, parts, supplies, accessories, applications, installations, repairs, wiring or connectors not supplied or authorized by ATEM POWER which damage this product or result in service problems.
8. Failure to follow installation and maintenance instructions.