BAT-48160-01

LiFePO4 Lithium Iron Phosphate Battery, 48V 160Ah

OPERATOR'S MANUAL

Serial Number	
Purchase Date	

Note: Thank you for purchasing this product. Please read through the instructions carefully. Installer is responsible for damage if instructions are not followed properly. The RHOX BAT-48160-01 LiFePO4 is an economic, high quality, 51.2V 160Ah battery for a 48V system.

Charger Requirements: Charging requires the use of RHOX CGR-722 Battery Charger or optional CGR-715 Battery Charger ONLY. ****DO NOT USE LEAD ACID GOLF CAR CHARGERS****. Any other charger can damage the battery, void the warranty and/or cause a safety issue. These chargers provides protection against overload, over-voltage, over-heating, short circuit and reverse polarity connections. The RHOX battery pack's internal battery management system (BMS) will turn the charger ON and OFF as required.

Approved Charger (Single 48V System):

- **RHOX CGR-722, 58V 22A LiFePO4 Battery Charger**
- **RHOX CGR-715, 58V 15A LiFePO4 Battery Charger**

Charger Plugs: The RHOX CGR-715 and CGR-722 Battery Chargers includes a short cord with a SB50 gray quick disconnect (QD) connector. Vehicle gender specific cords for E-Z-Go, Club Car and Yamaha are sold separately. Please ensure SB50 QD connectors are tight before use. Observe polarity!

Specifications

DC OUTPUT / INPUT	
Rated DC Output Voltage	51.2VDC
Battery Type	Lithium LiFePO4 51.2V, 16 Cell
With Battery Management System (BMS)	16S, 51.2V, 250A
Rated Capacity	160AH
Energy	8.2KWH Total
Cycle Life	>3,000 Times @ 0.5C 100% DOD
Charge Voltage	58.4V +/-0.2V
Max Continuous CHARGE Current	22A Charger (CGR-722) / Optional 15A Charger (CGR-715)
Max Continuous REGEN Current	Motor Controller 100A REGEN Setting
Max Continuous Discharge Current	250A
Max Surge 10 Sec. Discharging Current	350A @ 10 Seconds
Peak Discharging Current	600A, Momentary 2 Seconds
Power Switch: Out=OFF / In=ON	Storage SLEEP Mode BMS OFF <800uA (0.0008A)
Low Voltage Setting	Motor Controller <45VDC (BMS Shut Off 41V)

MECHANICAL	
Dimensions Overall	760mm x 302mm x 255mm (29.92” x 11.89” x 10.04”)
Dimensions Battery Case	696mm x 302mm x 255mm (27.40” x 11.89” x 10.04”)
Water Resistance	IP65 (Do NOT use High Pressure Washer)
Weight	83 kg ea. (182.98 lbs ea.)
Torque Specifications	M8 Nut: 8Nm (5.9 FT LB)

ENVIRONMENTAL	
Operating CHARGING Temperature	0° to 45°C (32° to 113°F)
Operating DISCHARGING Temperature	-20° to 45°C (-4° to 113°F)
Charge Time (Estimated)	7-10 Hours (22A Charger), 10-14 Hours (15A Charger)

CALIFORNIA PROPOSITION 65 WARNING

WARNING: This product contains chemicals known to the state of California to cause cancer or birth defects or other reproductive harm.

For more information: www.P65Warnings.ca.gov

Recycle Electronic Component

Warning and Safety Precautions

- Minimum Wire Gauge: The BAT-48160-01 LiFePO4 battery requires a MINIMUM of 2AWG cable. Correctly sized terminals with a good quality crimp are required for proper installation.
- Use in High Temperatures (> 110°F (37.8°C)): To increase the life of the battery, it is recommended to not push the ratings of the battery capacity, current or low voltage when operating in hot environments greater than 110°F (37.8°C).
- Secure Batteries: Properly install and secure batteries within the vehicle. Operation of vehicle creates high vibration and the vehicle can be involved in accidents. Batteries must be properly secured to prevent movement.
- **DO NOT DISASSEMBLE BATTERY!**
- Disposal: Recycle batteries at a local battery reclamation facility.
- Safety glasses and gloves should be worn at all times when working on batteries.
- Conversion from Lead Acid Batteries: It is recommended to wash and remediate corrosion with paint before new battery installation if converting from lead acid batteries.
- Installation Instructions: Follow installation instructions and guidelines provided by the vehicle manufacturer.
- New LiFePO4 Batteries: It is recommended to CHARGE THE BATTERY FIRST BEFORE DRIVING. It takes 2-3 discharge/recharge cycles to balance a NEW battery.
- Never leave the charger unattended when it is connected to its power supply.
- Cleaning: Never use high pressure washer to clean the batteries. Use a damp cloth.
- Never place the charger and batteries connected to it on any form of flammable surface.
- Never operate or charge the batteries in the vicinity of flammable material or gas.
- Do not submerge batteries in liquids.
- Low Voltage Setting: Motor controller settings to low level shutdown and current limit prevent damage or BMS faults.
- Do NOT short circuit the terminals.
- **Output Fuse Required**: A 300A (max rating) output fuse is required.
- DC to DC Converters: Aux circuits (DC-DC converters) should be connected to the key switch through a 15A fuse (or as recommended by vehicle manufacturer).
- Polarity: Always maintain battery polarity. Terminal Color: RED=POSITIVE(+), BLACK=NEGATIVE(-).
- EV, Golf Car or Other Electric Vehicles: A new solenoid is required to maintain warranty and prevent battery failure.
- Read the charger manufacturer's instructions and strictly adhere to them.

DRIVE, CHARGE, DRIVE, REPEAT.

RHOX Lithium Iron Phosphate Batteries are highly efficient, very compact, and most importantly, durable.

RED HAWK
A Family of Brands
RHOX RED HAWK DoubleTake