User Manual

Golf Cart Lithium Ion Battery

Attn: Mr Izak Krige

Tel: +27 82 558 8206

Email: battery@scmsystems.co.za

Web: www.scmsystems.co.za

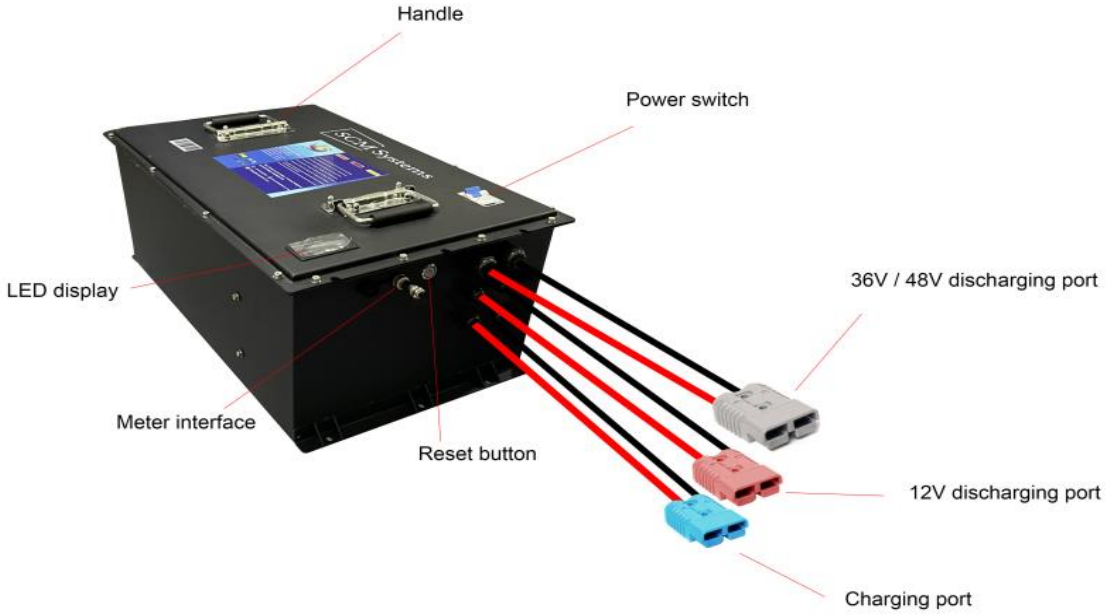
Welcome to SCM Systems products

SCM Systems provides safe deep cycle golf cart batteries. Our golf cart lithium battery packs are a type of Lithium iron phosphate battery (LiFePO4), it is a reliable power source that doesn't fade over time. The batteries are the best replacement for the lead-acid battery, and are available for drop-in replacement in the Club Car, EZ-GO and other makes of golf carts.

Please read the user manual carefully before using the product and always take care when using this product. This product is not intended for use by young or infirm persons without supervision.

Overview Main Features of 36 & 48 Volt Batteries

- Safest Lithium Ion system available
- Minimum of 2000 charge cycles with 12-year lifespan.
- Maintenance free with no corrosion due to lead acid battery fumes.
- 12 Volt regulated output power for lights, GPS etc.
- Battery designed to last for two rounds of golf with four occupants on board.
- Ideal for rental carts with overnight charging.
- Reduces weight of cart by 100 to125kg
- Charger can be mounted on-board for ease of charging.
- Continuous State of Charge (SOC) digital meter.
- Leads connected semi-permanently with Anderson connectors – no plugging except for 220V input when charging.
- Change over switch isolates golf cart completely when charging takes place, providing maximum protection of the golf cart controller



Battery Specification

Model	SCM CODE	SCM-36100	SCM-48100
Technical	Nominal voltage	36V	48V
Parameter	Nominal capacity	100Ah	100Ah
	Life cycles	>2000 times	>2000 times
	Self discharge	Max 3% per month	Max 3% per month
	Power support	3 Rounds Golf	4 Rounds Golf
Standard charge current	Continuous charge	20A	40A
Standard discharge current	Continuous discharge	100A	120A
	Maximum discharge	200A	240A
Discharge voltage	Multi discharging port	36V &12V	48V& 12V
Charging time	Standard charge time	4h	2.5h
Environment	Charge temperature range	0°C~55°C	0°C∽55°C
	Discharge temperature range	-20°C∽55°C	-20°C∽55°C
General	Casing material	Stainless steel	Stainless steel
	Weight	28kg	39 kg
	Dimensions(L*W*H)	462*330*226mm	507*330*226mm
	IP rate	IP65	IP65
Protection	BMS Protetion	Prevent Short circuit /Over-charge /Over-discharge /Over-current/No fire/ No explosion	
	Power switch	An integrated 100A change over switch isolates the golfcart completely when charging takes place. This is maximum protection of the golf cart controller.	

Safety Operation

Improper handling of batteries and electrical components can result in serious injury.

- Do not remove the battery pack cover. Do not attempt to remove battery cells or battery cables.
- Do not use the battery pack without the control module installed. All battery and electrical service must be performed by an authorized service facility and personnel.
- All tools used in or around the battery pack area should be insulated. Do not intentionally cause a short to the power terminal (B+, B-) with a metallic object.
- Do not cut, tear or remove the seal tape. Do not disassemble or modify the design, including the electrical circuit, of the battery pack or control module.
- To prevent the risk of battery explosion, keep all flammable materials, open flames or sparks away from the batteries. Do not leave the battery pack near a fire or heat source. Do not throw Lithium-Ion batteries into a fire. Do not apply heat to any part of the battery pack or battery management module with a soldering iron. Do not place the battery pack in a microwave oven, dryer or high-pressure container.
- Do not attempt to operate the vehicle or charge the battery pack at temperatures above 140°F (60°C).
- Do not immerse or throw the battery pack in water. Do not pressure-wash the battery pack.
- Do not puncture the battery pack or control module. Do not strike the battery pack with a hammer or heavy weight. Do not step or stand on the battery pack. Do not throw or drop the battery pack on a hard surface.
- If the battery pack terminals are contaminated or dirty, clean them with a dry cloth before using the battery pack.
- Keep the battery pack and control module away from static electricity.

Storage

- For storage over one month, place the battery in a dry and ventilated room that is 32°F~95°F.
- Do not store near corrosive material, fire, and heat sources.
- In order to avoid over discharge, for long-term storage, the power must be turned off and the SOC is kept above 60% to avoid over discharge. The battery must be fully charged and must be charged again every 3 months.

Battery replacement steps for Golf cart

1.Open the golf cart compartment, disconnect all the wires safely, you will see the original lead-acid andpull the batteries out.



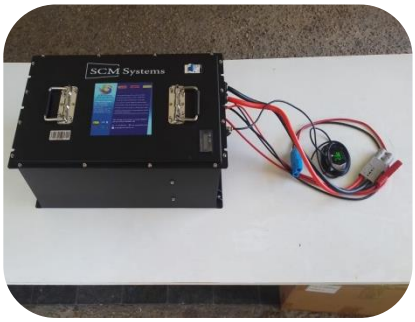
2.Clean with a wire brush and neutralized with a baking soda solution. When dry, the whole area is painted with an etching primer paint.



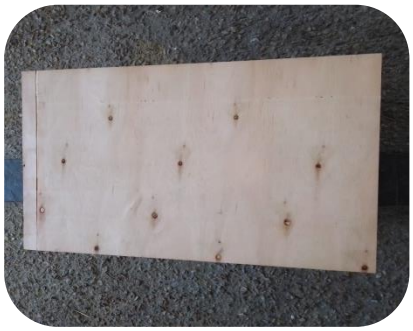
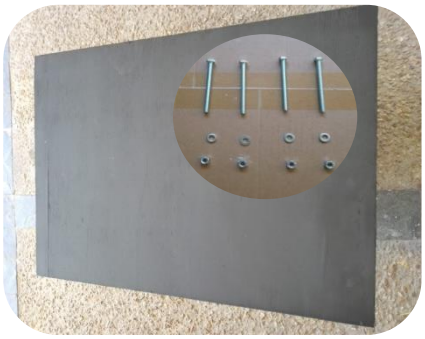
3.Open Charger box and take out the charger– **Note Instruction manual**



4.Unbox the battery, connect the battery manager, connect the charger to the blue Anderson connector. Charge until 100% full. The indicator light on the charger will turn **green**.

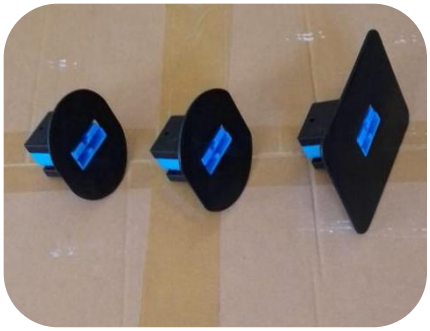



5.The battery rests on a base board, which is supplied with every battery. It has to be cut to size and painted. The battery is lowered into the cart and screwed onto the base board which is fixed with bolts and nuts.

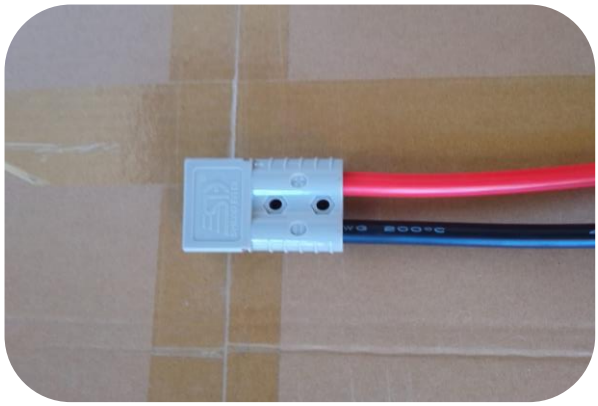
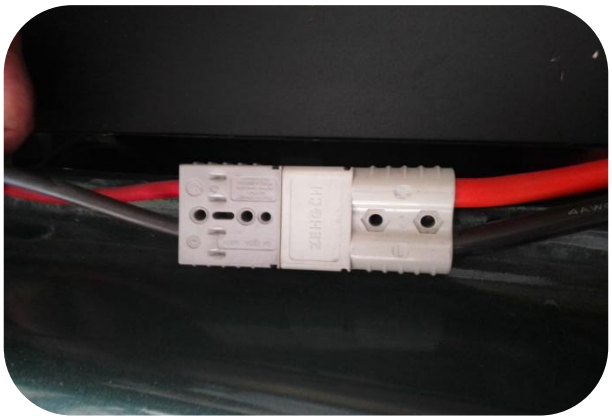




6. The on-board charge port is removed and replaced with a new charge port that contains the blue Anderson connector that is on the battery charging lead. Various charge port configurations are available. Small round, bigger round, square and oblong.

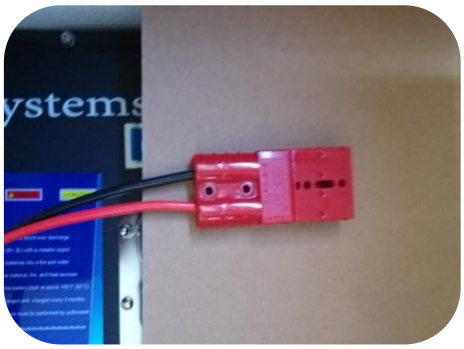


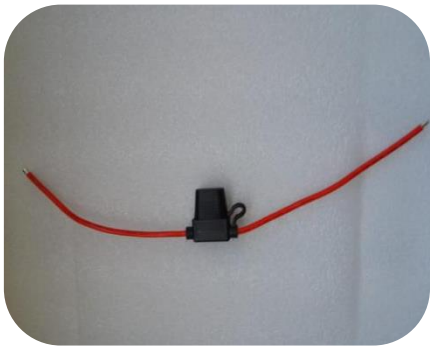


7. The main positive and negative leads are crimped into the grey Anderson connector.

8. If 12V power is required for lights, GPS, USB charge port or hooter, the 12V leads on the cart are crimped into a red Anderson connector. It is a good practice to include a 10Amp in-line fuse in the 12V circuit.





9.The battery manager lead is threaded through the cart body to the front dash. A suitable cut out is made to install the battery manager. A charger plug handle is an optional accessory.

ATTENTION

1. Only authorized personnel are allowed to operate or make adjustments to the battery!

2. Extended storage without recharging or repairs done by an unauthorized person or modification. This warranty is in lieu of all other express warranties. SCM Systems will not be liable for consequential or incidental damage.