

# SCA

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YEAR  
WARRANTY

# 6V-2A / 12V-4A 7 STAGE BATTERY CHARGER

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## INSTRUCTION MANUAL



PLU 611231

## TECHNICAL DATA

Model	HFGP04DVL
Charger Type	7 Stage Intelligent Battery Charger
Compatible Rechargeable Battery Types	6V and 12V Flooded Lead Acid, AGM, GEL, Maintenance Free, Calcium and LiFePO4 (6V 2 cells & 12V 4 cells)
Lithium Compatible	Yes, LiFePO4 batteries only
AC Input Voltage (V)	220V-240V / 50-60Hz
Maximum Input Power	68.7W
Maximum Output Power	58.4W
Rated Output Current	6V 2A / 12V 4A
Absorption/boost Output (V)	7.2V / 14.6V
Float Output (V)	6.6V / 13.4V
Battery Type Selections	Manual and Automatic selection options
Maximum Recommended Battery Charging Capacities	6V - 2A - max 25Ah / 240CCA
	12V - 4A - max 50Ah / 500CCA
Maximum Recommended Battery Maintenance Capacities	6V - 2A - max 50Ah / 380CCA
	12V - 4A - max 120Ah / 750CCA
Minimum DC Start Charge (V)	Above 1V
Ambient Working Temperature	-20°C to 50°C
Case Type	Plastic
Water Resistance	Not water resistant. Use indoors or undercover only.
240V Cable Length	1m
12V Cable Length	0.5m
Additional Lead Lengths (1 x alligator clips, 1 x ring terminals)	0.5m each

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## FIRST AID

- For advice, contact the Poisons Information Centre in Australia (PH: 13 11 26) or the National Poisons Centre in New Zealand (PH: 0800 764 766)
- If battery acid makes contact with the skin or clothing, wash immediately with soap and water.
- If battery acid makes contact with the eyes, hold eyelids apart and flush the eye continuously with fresh running water for at least 15 minutes or until the Poisons information centre advises you to stop.
- If battery acid is swallowed, do not induce vomiting. Drink a glass of water and seek medical assistance.

## FEATURES

- 7 stage charging system
- Suitable for Gel, Lead Acid, AGM, Maintenance Free Calcium and Lithium LiFePO4 automotive battery types.
- LCD indicator shows charging status. Integrated battery test function notifies of battery fault or reverse polarity connections.
- Internal protection systems.
- Supplied with alligator clamps and ring terminals for fixed connections.
- Memory function memorizes the battery type status and applies this battery type as the default status for the next charge cycle.

## 7 STAGES OF CHARGING

This charger uses an automatic 7 stage charging process, designed to optimally charge and maintain batteries.

- Stage 1: Analysis & Desulphation - pulsed current
- Stage 2: Soft Start - constant current
- Stage 3: Bulk Charge - high current
- Stage 4: Absorption - constant voltage
- Stage 5: Rest & Diagnosis – no current, voltage drop monitored
- Stage 6: Recondition - pulsed current, float voltage
- Stage 7: Maintenance - low current, float voltage

## BATTERY PROTECTIONS

### a. Reverse polarity protection

If the clamps are connected to the battery in reverse, the reverse polarity protection will engage. Refer to error code “Er1” in the TROUBLESHOOTING ERROR CODES section on page 11.

### b. Short circuit protection

If the charger detects less than 1.0V across the clamps, the short circuit protection will engage and no power will be delivered to the cables. Refer to error code “Er1” in the TROUBLESHOOTING ERROR CODES section on page 11.

### c. Over voltage protection

When the charger is set to charge in a different voltage than the detected voltage of the battery, this protection will engage. Refer to error code “Er1” in the TROUBLESHOOTING ERROR CODES section on page 11.

### d. Overheat protection

The overheat protection mode will engage if the temperature of the charger’s housing reaches 65°C. The charger will decrease the charging current and even shut itself off, if overheating is detected. Once the charger cools down to 60°C, charging will automatically resume. Refer to error code “Er3” in the TROUBLESHOOTING ERROR CODES section on page 11.

### e. Overload protection











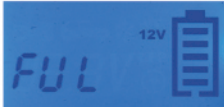
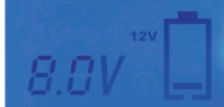
This protection is triggered if the charger output current is greater than the maximum output. The charger will automatically cut off the output and enter into an idle state, displaying error code “Er1”.

### f. Overcharge protection

If the overcharge protection mode engages, the charging current will decrease with the increase of the battery voltage until the battery is fully charged. The charger will automatically disconnect the output and display “FUL”, preventing the risk of overcharge.

## BATTERY CHARGER FUNCTIONS

### LCD SCREEN WILL DISPLAY:

6V MODE			
			
6V Mode	Er 1	Er 2	Er3
			
FUL	Battery charging status display		
6V Mode			
Battery charging status display			
12V MODE			
			
12V Mode	Er 1	Er 2	Er3
			
FUL	Battery charging status display		
12V Mode			
Battery charging status display			

### Manual Selection & Automatic Charge:

- Connect charger to battery & AC outlet
- Press button to select 6V or 12V mode (within 5 seconds)
- Charging will now automatically commence

### Automatic Selection & Automatic Charge:

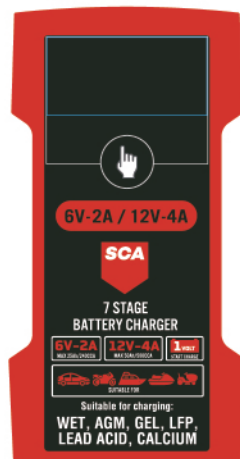
- Connect charger to battery & AC outlet
- Charger will automatically identify the battery voltage type & commence charging
- LFP Battery will be automatically selected, Manual selection is not required.

#### 6V Mode (2A)

- Use this setting for charging 6V batteries

#### 12V Mode (4A)

- Use this setting for charging 12V batteries



## CHARGING INSTRUCTIONS

### IMPORTANT:

Note the time the charger is connected to the battery and switched on.

#### Step 1 - Electrolyte Level Check

For sealed maintenance free batteries check the state of charge indicator.

**Please Note:** Refer to the vehicle manufacturers' owner's manual.

#### Step 2 - Connect battery charger to the battery

**Please Note:** Refer to the vehicle manufacturers' owner's manual.

There are three (3) options for connecting the battery charger to a battery

- i. Connect battery charger to a battery out of the vehicle
- ii. Connect battery charger to a battery fitted inside vehicles engine bay
- iii. Hard wire connection battery charger to a battery

##### i. Battery out of a vehicle

- Ensure the battery is in a safe location on a stable surface with adequate ventilation.
- Ensure the correct Personal Protective Equipment is being worn i.e. gloves and eye wear.
- Connect the RED lead (Battery Clip) to the Positive Terminal (+/positive) on the battery.
- Connect the BLACK lead (Battery Clip) to the Negative Terminal (-/negative) on the battery.
- The battery charger is then to be connected to the supply mains.
- Turn the 240V AC power source ON to turn the battery charger on.
- Charging will automatically commence. After charging, disconnect the battery charger from the supply mains.
- Disconnect the BLACK lead (Battery Clip) from the Negative Terminal (-/negative).
- Disconnect the RED lead (Battery Clip) from the Positive Terminal (+/positive).
- Refit battery into vehicle and correctly reconnect using the vehicle manufacturer's recommendations.





## ii. Battery connected in vehicle

- Ensure the correct Personal Protective Equipment is being worn I.e. Gloves and Eye Wear.
- Ensure vehicle ignition is switched OFF before making ANY connection to battery.
- The battery terminal not connected to the chassis (positive) must be connected first.
- The second connection (negative) is to be made to the chassis, remote from the battery and fuel line.
- The battery charger is then to be connected to the supply mains.
- Turn the 240V AC Power Source ON to turn the battery charger on.
- Charging will automatically commence.
- After charging, disconnect the battery charger from the supply mains. Then remove chassis connection, and then the battery connection.



### iii. Hard wire connection

- Ensure the battery is in a safe location on a stable surface with adequate ventilation.
- Ensure the correct Personal Protective Equipment is being worn i.e. gloves and eye wear.
- Secure the RED Battery Cable ring terminal to the Positive Terminal (+/positive) on the battery.
- Other connection is to be made to the chassis, remote from the battery and fuel line.
- Plug the battery charger into the one-way connector on the ring terminals.
- The battery charger is then to be connected to the supply mains.
- Turn the 240V AC Power Source ON to turn the battery charger on.
- Charging will automatically commence. After charging, disconnect the battery charger from the supply mains and disconnect battery connection.
- Disconnect the charger one way connector from the ring terminals, and ensure any loose leads in the engine bay are secure.

### Step 3 - Charging

Either press the mode selection button on the battery charger (within 5 seconds of connection) to select mode, or the charger will automatically commence charging after 5 seconds.

Alternatively, once connected to AC and DC, the battery charger will commence charging after 5s.

#### **Note:**

If the battery charger does not detect a properly connected battery, an error code will display. In this instance, follow the appropriate instructions and reconnect the charger to the battery terminals.

If the battery clips or ring terminals are connected in reverse, an error code will display showing that the charger has been incorrectly connected to the battery. Follow the appropriate instructions and reconnect the charger to the battery terminals.

## FREQUENTLY ASKED QUESTIONS

Q. Is this battery charger waterproof, or water resistant?

A. No. This battery charger is designed for use indoors or undercover only.

Q. Is this battery charger suitable for lithium batteries?

A. This battery charger is suitable for 6V (2 cells) and 12V (4 cells) LiFePO<sub>4</sub>, Lithium Iron Phosphate batteries only.

Q. Is this battery charger suitable for 24V batteries?

A. No. This battery charger is suitable for 6V and 12V batteries only.

Q. Can this battery charger be left connected to a battery permanently?

A. No. Do not leave this battery charger connected to the battery for more than 48 hours.

### **IMPORTANT:**

Leaving a battery on charge permanently may cause damage to your battery, if a fault occurs. Lead Acid batteries require frequent checking of electrolyte levels. It is not recommended to leave AGM batteries on float charge permanently. Do not leave maintenance free batteries on float charge for extended periods as the electrolytes can dry out and cause an internal explosion.

Always refer to the vehicle or battery manufacturers' owners manual.

## TROUBLESHOOTING ERROR CODE

Code	Condition	Possible Cause	Solution
Er1	Battery voltage <1V before charging.	The battery is defective.	Replace the battery.
	Reverse connection.	Accidental reverse connection of clips or ring terminals.	Check connection and follow instructions to reconnect clips or ring terminals.
	Automatic charge does not commence after 5 seconds.	Charger clips or ring terminals not properly connected to battery.	Check connections and follow instructions to reconnect if necessary.
		Incorrect voltage Mode selected.	Select correct Mode on charger, or disconnect & reconnect charger and wait 5 seconds for automatic charge to engage.
Battery voltage is >7.8V (6V battery) or >15.6V (12V battery) before charging.	Incorrect voltage Mode selected.	Select correct Mode on charger, or disconnect & reconnect charger and wait 5 seconds for automatic charge to engage.	
Er2	Battery voltage is <4.5V (6V battery) or <9V (12V battery) after 30 minutes of charging. Battery is not fully charged after 48 hours on charge.	A load may be connected to the battery.	Disconnect the load and attempt to charge again.
		Battery capacity is too big.	Leave battery on charge, checking the battery and charging progress regularly.
		The battery is defective.	Replace the battery.
	Battery voltage is <6V (6V battery) or <12V (12V battery) in 1 minute after a full charge.	The battery is sulphated beyond reconditioning.	Replace the battery.
Er3	The temperature of the charger is too high.	High ambient temperature.	Ensure adequate ventilation. The charger will resume charging after cooling down to 60°C.

## WARRANTY

Our product is guaranteed to be free from quality and manufacturing defects for a period of 5 years.

If your product becomes defective during this period, SRGS PTY LTD will offer you either a replacement, credit or refund where a product is faulty; wrongly described; different from the sample shown to you or do not do what they are supposed to do.

This warranty will not cover substantially 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 the warranty, take the product to the front Service Desk of your nearest store of purchase. You will need to show receipt or other proof of purchase. Additional information may be required to process your claim. Should you not be able to provide proof of purchase with a receipt or bank statement, identification showing name, address and signature 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. For online store purchases, SRGS PTY LTD will pay for the return freight for any product assessed as having a major failure.

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 SRGS PTY LTD, 6 Coulthards Avenue, Strathpine QLD 4500, Australia. Phone: 1300 175 010.

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Manufactured and packaged for SRGS PTY LTD ABN 23 113 230 050  
6 Coulthards Avenue, Strathpine QLD 4500, Australia