



# INSTRUCTIONS FOR: COMPACT AUTO DIGITAL BATTERY CHARGER 3 CYCLE - 12V MODEL NO: SMC01.V2

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.



**IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS, AND CAUTIONS. USE THIS PRODUCT CORRECTLY, AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY.**

## 1. SAFETY INSTRUCTIONS

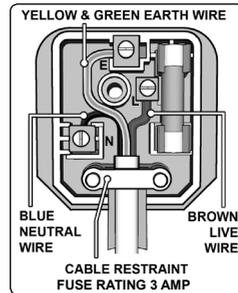
### 1.1 ELECTRICAL SAFETY

**WARNING!** It is the responsibility of the owner and the operator to read, understand and comply with the following: You must check all electrical products, before use, to ensure that they are safe. You must inspect power cables, plugs, sockets and any other connectors for wear or damage. You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices. A Residual Current Circuit Breaker (RCCB) should be incorporated in the main distribution board. We also recommend that a Residual Current Device (RCD) is used. It is particularly important to use an RCD with portable products that are plugged into a supply which is not protected by an RCCB. If in any doubt consult a qualified electrician. You may obtain a Residual Current Device by contacting your Sealey dealer. You must also read and understand the following instructions concerning electrical safety.

- 1.1.1 The **Electricity at Work Act 1989** requires that all portable electrical appliances, if used on business premises, are tested by a qualified electrician, using a Portable Appliance Tester (PAT), at least once a year.
- 1.1.2 The **Health & Safety at Work Act 1974** makes owners of electrical appliances responsible for the safe condition of those appliances and the safety of the appliance operators. If in any doubt about electrical safety, contact a qualified electrician.
- 1.1.3 Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply. See 1.1.1 and 1.1.2 and use a Portable Appliance Tester.
- 1.1.4 Ensure that cables are always protected against short circuit and overload.
- 1.1.5 Regularly inspect power supply cables and plugs for wear or damage and check all connections to ensure that none are loose.
- 1.1.6 **Important:** Ensure that the voltage marked on the appliance matches the power supply to be used and that the plug is fitted with the correct fuse - see fuse rating to right.
- 1.1.7 **DO NOT** pull or carry the appliance by the power cable.
- 1.1.8 **DO NOT** pull the plug from the socket by the cable.
- 1.1.9 **DO NOT** use worn or damaged cables, plugs or connectors. Immediately have any faulty item repaired or replaced by a qualified electrician. When a BS 1363/A UK 3 pin plug is damaged, cut the cable just above the plug and dispose of the plug safely. Fit a new plug according to the following instructions (UK only).
  - a) **Connect the GREEN/YELLOW earth wire to the earth terminal 'E'.**
  - b) **Connect the BROWN live wire to the live terminal 'L'.**
  - c) **Connect the BLUE neutral wire to the neutral terminal 'N'.**
  - d) **After wiring, check that there are no bare wires, that all wires have been correctly connected, that the cable outer insulation extends beyond the cable restraint and that the restraint is tight.**

Double insulated products, which are always marked with this symbol , are fitted with live (brown) and neutral (blue) wires only. To rewire, connect the wires as indicated below. **DO NOT** connect either wire to the earth terminal.

- 1.1.10 If an extension reel is used it should be fully unwound before connection. A reel with an RCD fitted is preferred since any appliance plugged into it will be protected. The cable core section is important and should be at least 1.5mm<sup>2</sup>, but to be absolutely sure that the capacity of the reel is suitable for this product and for others which may be used in the other output sockets, we recommend the use of 2.5mm<sup>2</sup> section cable.



### 1.2 GENERAL SAFETY

- WARNING! DO NOT USE ON ANY OTHER BATTERIES APART FROM SEALED LEAD ACID BATTERIES.**
- WARNING!** Disconnect the charger from the mains power before servicing or performing any maintenance.
- ✓ Disconnect the charger from the mains power before disconnecting from the battery.
- ✓ Maintain the charger in good condition (use an authorised service agent only).
- ✓ Keep the charger clean for best and safest performance.
- WARNING!** Ensure there are no sources of ignition near the work area i.e. naked flames, cigarettes, flame heaters etc as the charging process produces explosive gases.
- WARNING!** Ensure the working area is well ventilated as the gases produced are explosive.
- ✓ Locate the charger in a suitable work area. Keep area clean and tidy and free from unrelated materials, and ensure there is adequate lighting.
- ✓ Wear approved safety eye protection (standard spectacles are not adequate).
- ✓ Remove ill fitting clothing. Remove ties, watches, rings, and other loose jewellery, and contain long hair.
- ✓ Read vehicle manufacturer's instructions manual to check for any specific battery charging information.
- ✓ Disconnect the battery from the vehicle and move it to a safe, dry level area for charging. If the battery cannot be removed from the vehicle refer to manufacturer's hand book.

- ✓ Clean the charger clamps and battery terminals to remove any oxidation.
- ✓ Ensure the correct clamp polarity is observed when connecting to the battery. **Positive** is indicated by (+) and is Red, **negative** is indicated by (-) and is black.
- X **DO NOT** pull or carry the charger by its power supply lead. Products must not be pulled or carried by their output cables.
- X **DO NOT** pull power plugs from sockets by the power cable.
- X **DO NOT** attempt to charge a non-rechargeable battery.
- X **DO NOT** use the charger for any purpose other than that for which it is designed.
- X **DO NOT** allow the charger terminal clamps to touch each other when the power is on. Remember that gases are produced which may ignite if sparks occur.
- X **DO NOT** place the charger inside the vehicle.
- Remove the battery to a safe distance for charging.
- X **DO NOT** get the charger wet or use in damp or wet locations or areas where there is condensation.
- X **DO NOT** operate the charger if damaged.
- X **DO NOT** attempt to modify or open the charger.
- X **DO NOT** charge the battery with the engine running.
- X **DO NOT** charge a frozen battery.
- ✓ When not in use unplug from the mains power supply and store in a safe, dry, childproof area.
- X **DO NOT** allow untrained persons to operate the charger. This appliance is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given instruction concerning the use of the appliance and are supervised by a person responsible for their safety.
- ✓ Keep children and unauthorised persons away from the working area. Children must not use the charger and should be constantly supervised to ensure they do not play with the charger.

⊠ **WARNING!** Be vigilant and cautious during the operation of battery charging as the electrolyte is highly corrosive and any gases emitted are explosive.

**DANGER! BE AWARE, LEAD ACID, GEL, AGM, VRLA, AND LIQUID ELECTROLYTE BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS VERY IMPORTANT TO READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY, EACH TIME YOU USE THE CHARGER.**



Follow these instructions and those published by the battery and vehicle manufacturers and the manufacturer of any equipment you intend to use in the vicinity of the battery. Remember to review warning marks on all products and on engines.

### 1.3 PERSONAL PRECAUTIONS

- ✓ Ensure there is another person within hearing range of your voice, or close enough to come to your aid, should a problem arise when working near a lead acid battery.
- ✓ Wear safety eye protection and protective clothing. Avoid touching eyes while working near battery.
- ✓ Have fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.

- ✓ Wash immediately with soap and water if battery acid contacts skin or clothing. If acid enters eye, flush eye immediately with cool, clean running water for at least 15 minutes and seek immediate medical attention.
- ✓ Remove personal metallic items such as rings, bracelets, necklaces and watches. A lead acid battery can produce a short-circuit current high enough to weld a ring or similar to metal, which would cause severe burns.
- ✓ Ensure hands and clothing are clear of fan blades, belts and other moving or hot parts of engine. Remove ties and contain long hair.
- X **DO NOT** smoke or allow a spark or flame in the vicinity of battery or engine.

## 2. INTRODUCTION

Fully automatic 3-cycle switch mode charger and maintainer designed for charging a variety of batteries: SLA, WET, AGM and VRLA. You know exactly how the charger is performing; the LED's display indicates power on charging phase and full. Charger will recover slightly sulphated batteries and may rescue drained batteries. Supplied with multi-fit charger cables featuring crocodile clips, eyelets, vehicle accessory plug and hard-wired terminals incorporating a water tight plug and socket for permanent installation. For motorcycles and cars. Plug in, connect to the battery and the charger does the rest.

SPECIFICATION	
MODEL NO:	SMC01.V2
Input Voltage:	230V
Output Voltage:	12V
Charging Current	2A
Input Current	0.32A
Efficiency	>80%
Type	3-Cycle
Back Current Drain	<1Ah/month
Ambient Temperature	-20°C to +50°C
Housing Protection	IP44
Dimensions (LxWxH)	198 x 82 x 40.5
Weight:	0.44kg

## 3. CONNECTION TO BATTERY

**NOTE:** THE CHARGER SHOULD BE CONNECTED TO THE BATTERY OR THE VEHICLE ACCESSORY SOCKET, **BEFORE** CONNECTING TO THE MAINS SUPPLY.

- 3.1 The output cable from the charger terminates in a socket into which three alternative leads can be connected. (see Fig.1)
  - 3.1.1 One lead set (A) has two colour coded battery clamps which can be quickly attached to and detached from the battery posts. The other end of the cable terminates with a plug for connection to the charger lead socket.
  - 3.1.2 The second lead (B) can be connected to the vehicle via the vehicle accessory socket. The other end of the cable terminates with a plug for connection to the charger lead socket.
  - 3.1.3 The third lead (C) is for semi permanent connection to the battery via eyelets. The other end of the cable terminates with a plug for connection to the charger lead socket.



Fig.1

**3.2 CHARGING A NEGATIVE EARTHED BATTERY:**

- 3.2.1 Ensure that the black clamp on the clamp lead is not touching the battery or the fuel line.
- 3.2.2 Connect the positive (+) red clamp to the positive (+) battery post and connect the negative (-) black clamp to the negative (-) battery post or vehicle chassis.

**3.3 CHARGING A POSITIVE EARTHED BATTERY:**

- 3.3.1 Ensure that the red clamp on the clamp lead is not touching the battery or the fuel line.
- 3.3.2 Connect the negative (-) black clamp to the negative (-) battery post and connect the positive (+) red clamp to the positive (+) battery post or vehicle chassis.

**3.4 BATTERY NOT CONNECTED TO A VEHICLE.**

- 3.4.1 Connect the (+) red clamp to the positive (+) battery post and connect the (-) black clamp to the negative (-) battery post.

**3.5 PERMANENT CONNECTION TO VEHICLE USING EYELET LEAD.**

- 3.5.1 Connect the eyelet on the red (+) wire to the positive (+) battery terminal and connect the eyelet on the black (-) wire to the negative (-) battery terminal.

**NOTE:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.  
**IMPORTANT:** No liability is accepted for incorrect use of this product.

**WARRANTY:** Guarantee is 12 months from purchase date, proof of which will be required for any claim.

**INFORMATION:** For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.

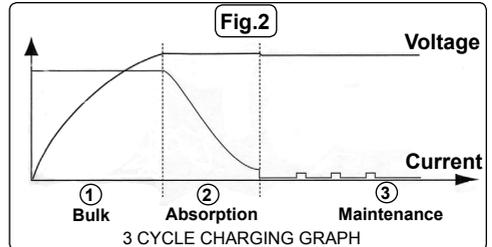


**4. OPERATION**

**NOTE:** Connect the charger to the battery as instructed in section 3 before connecting to mains power supply.

**4.1 CONNECT CHARGER TO MAINS POWER SUPPLY.**

- 4.1.1 Insert the three pin plug on the mains lead into an isolated mains power supply.
- 4.1.2 Switch on the mains power supply and the "POWER" LED will illuminate.
- 4.1.3 Depending upon battery status, either the "CHARGING" LED or the "FULL" LED will also illuminate.
- 4.1.4 If "CHARGING"; monitoring only required.
- 4.1.5 If "FULL" and maintainer mode is not required, switch off the mains power supply, disconnect, clean and store indoors.



**4.2 3 - STAGE CHARGING (Fig. 2)**

- 4.2.1 **Stage 1 Bulk/Rapid Start Charge** (20%-70% charge) The charger delivers maximum charging amperage to re-energise any 12 Volt battery, digital sensors automatically moves into stage 2 of the process.
- 4.2.2 **Stage 2 Absorption Charge** (70%-90% charge) Maintains the charge at a safe voltage, which remains constant while the current requirement diminishes.
- 4.2.3 **Stage 3 Maintenance** (90%-100% charge) Voltage is automatically maintained with pulsing low input current. Occasional monitoring only required.

**5. MAINTENANCE**

- 5.1 This charger requires no specific maintenance other than cleaning which should be done with a dry cloth or a tissue. **DO NOT** use any solvents or cleaning agents on the casing.
- 5.2 Ensure that the charger is unplugged from the mains before installing or performing any maintenance.

**Environmental Protection.**

Recycle unwanted materials instead of disposing them as waste. All tools, accessories and packaging should be sorted, taken to a recycle centre and disposed of in a manner which is compatible with the environment.

When the product is no longer required, it must be disposed of in an environmentally protective way.



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