

**MANUAL**

**Model: CVP 12/24-5**

Solar Converters Inc. - Rev. A

**Warning:** To be installed and connected by qualified personnel only. Ensure all power sources are disconnected when making any connections to this unit.

**1.0 Introduction**

This unit outputs a constant 15 or 30 V from a 12 or 24 V battery to operate a DC Pump from a 12 or 24 V nominal battery system. The output voltage is adjustable with an internal POT.

**2.0 Electrical Specifications**

Input Voltage (nominal battery)	22 - 30V	11 - 15	11 - 15
Lead acid assumed	24 V nominal	12 V nominal	12 V nominal

Low Voltage disconnect			
On	23.8 V	11.9	11.9
Off	22.0 V	11.0	11.0
Time delay	1 second		

Float Switch Control                      Works even if power boost broken  
 Connect yellow wire to Black to turn pump off.

Output Voltage (V) +/- 2% adjustable by internal POT	28.0	14.0	28.0
---	------	------	------

Output Current (Amps)	5.0	5.0	2.5
short term (10 seconds) current limited	16.0	16.0	8.0
Note: limited by fusing characteristics			

Input Fuse:                                  Automotive Style: 7.5 A  
 Littelfuse ATC -7.5 or equiv.

Quiescent Current:                      15 ma

Transient Protection:                    All Inputs and Outputs

Efficiency                                    92 - 96 % depending on loading and state of charge

**3.0 Mounting**

The unit mounts much like a junction box.

- 1) Determine location of the controller.
- 2) Use its external "ears" to mount with appropriate screws.

**4.0 Connections**

**Warning:** To be installed and connected by qualified personnel only. Ensure all power sources are disconnected when making any connections to this unit.

**Connect Ground**

Using wire of sufficient gauge ( min. #16 AWG), connect the pump negative lead and the controller black lead together to the battery negative.

Pump negative = Connect to Battery negative = Black

WARNING: To avoid flash or burn injuries, extreme care must be taken when making battery connections. Do not short the battery or output.

### **Connect Voltage set Wires**

Connect the signal leads for to instruct the unit if 12 or 24 V system.

If 12 V battery driving 12 V pump, do not connect purple or orange wires to anything

If 12 V battery driving 24 V pump, connect only the orange wire to Black

If 24 V battery driving 24 V pump, connect both orange and purple to Black

### **Connect Pump Positive**

Using wire of sufficient gauge ( min. #16 AWG), connect the white lead to the pump + wires, environmentally seal connections if required.

Pump + = white

LAST CONNECTION: Connect Battery +  
ENSURE motor/pump is clear, free and safe to operate.

Using wire of sufficient gauge ( min. #16 AWG), connect the red lead to the battery or power source, environmentally seal the connections if required. NOTE: There will be a small spark as the battery charges the internal capacitors.

WARNING: To avoid flash or burn injuries, extreme care must be taken when making battery connections. Do not short the battery or output

Bat + = red

### **5.0 Voltage Adjustment**

The output voltage of this unit may be adjusted by removing the lid and adjusting the internal adjustment POT (small blue square part with a slot drive on its top) . While monitoring the output voltage , adjust the POT to achieve the desired output voltage. Note: If the attempted output voltage is .5 V less than the input voltage, the adjustment POT will have no affect. Turn the POT CW for more voltage, CCW for less voltage.

\*\*\*\*\*

**WARRANTY**

The product is warranted to be free from defects in material and workmanship for a period of one (1) year from the date of purchase by a retail customer. The purchase date must be evidenced by a valid and original sales receipt. In lieu of sales receipt, factory will use code date on its label. Removal of the Solar Converters Inc. label or serial number will void the warranty.

Product liability, except where mandated by law, is limited to repair or replacement at the manufacturer's discretion. No specific claim of merchantability or use shall be assumed or implied beyond what is printed on the manufacturers printed literature. No liability shall exist from circumstances arising from the inability to use the product, or its inappropriateness for any specific purpose or actual use, or consequences thereof for any purpose. **It is the user's responsibility to determine the suitability of the product for any particular use.** Solar Converters Inc. shall not be liable for any damages or any kind including without limitation, special, incidental or consequential obligations and liabilities of Solar Converters Inc. and the remedies of Buyer set forth herein shall be Solar Converters Inc. sole and exclusive liability.

Failure to provide a safe and correct installation, safe operation, or care for the product will void the warranty. Personal safety, and compatibility with any other equipment is the ultimate responsibility of the end user. Any returned product that shows significant evidence of abuse may not be covered by this warranty. Installation must be performed by a person with qualification to insure safe and effective operation and the installation thereof certifies that the installer has the technical qualifications to do so.

Solar Converters Inc. cannot guarantee the compatibility of its products with other components used in conjunction with Solar Converters Inc. products, including, but not limited to, solar modules, batteries, and system interconnects, and such loads as inverters, transmitters and other loads which produce "noise" or electromagnetic interference, in excess of the levels to which Solar Converters Inc. products are compatible. Solar Converters Inc. shall not assume responsibility for any damages to any system components used in conjunction with Solar Converters Inc. products nor for claims for personal injury or property damage resulting from the use of Solar Converters Inc. products or the improper operation thereof or consequential damages arising from the products or use of the products.

The warranties set forth herein are Solar Converters Inc. sole and exclusive warranties for or relating to the goods. Seller neither makes nor assumes any warranty or merchantability, any warranty fitness for any particular purpose, or any other warranty of any kind, express, implied or statutory. Solar Converters Inc. neither assumes nor authorizes any person or entity to assume for it any other liability or obligation in connection with the sale or use of the goods, and there are no oral agreements or warranties collateral to or affecting the sale of the goods.

**WARRANTY CLAIM PROCEDURE**

In the event of product failure, follow this warranty claim procedure.

1. Make sure the problem you are having is actually due to the suspected product and not some other part of the system. You may call technical support for advanced troubleshooting assistance.
2. If you determine that a Solar Converters Inc. product is actually defective, describe on paper, in detail the exact nature of the failure.
3. The product must be accompanied by proof of the date of purchase satisfactory to Solar Converters Inc.
4. Return the product and description to the business office address, along with your address and a daytime phone number. Purchasers must prepay all delivery costs or shipping charges as well as any other charges encountered, in shipping any defective Solar Converters Inc. product under this warranty policy. **No shipment will be accepted Freight Collect.**
5. Any return shipment from Solar Converters Inc. will be via Canada Post. Foreign shipments will ship best way. Special shipping arrangements are available at the customer's expense.