

**MANUAL\_**  
**Model: PT 12-10-WI DRAFT**  
 Solar Converters Inc. - Rev. B

**Note: This unit is designed to charge a battery from a 12 V nominal solar panel or an AC source of 90 – 260 Vac 50/60 Hz. It outputs 5 V, 48 V and 12 V DC to power a typical POE (Power Over Ethernet) system.**

## **1.0 Specification**

### **1.1 INPUTS**

#### **1.1.1 Solar Panel Input**

Input Voltage: 0 -30 DC volts PV Array, approx. 15.5 nominal operating  
 Current: 8 DC amps nominal,

Output Voltage: factory set 13.8 Vdc +/- 0.2 V  
 Current: 10 amps continuous, (provided sufficient solar power),

Connection: Internal Terminal Blocks  
                   SP+                  PV+  
                   SP-:              PV-

#### **1.1.2 AC Input**

90 – 260 VAC 50/60 Hz,  
 3 Amps AC Max:  
 Connection: 3 wire Receptacle

## **1.2 OUTPUTS**

### **1.2.1 BATTERY**

Output Voltage: factory set 13.8 Vdc +/- 0.2 V (adjustable by internal pot)  
 Current: 10 amps continuous, (provided sufficient solar power), Current Limited  
 Low Voltage Disconnect: Off @ 11 V, On at 12 V dc  
 Battery Fuse 25 A

Battery Test LEDs 12.2, 12, 11.8 Vdc

BAT+	Bat +
BAT-	Bat –

Note: Battery Connection May also be made with the output #12 AWG flying leads

White = Battery +  
 Blue Wire = Battery –

### **1.2.2 DC OUTPUTS**

#### **1.2.2.1 5 V Output:**

Voltage 5.3 Vdc  
 Current: 5 Amps  
 Connection: 2.5 mm power Plug = White end

#### **1.2.2.2 48 V Output**

Voltage 48 V DC +/- 0.3 V  
 Current 0.6 A DC  
 Connection:

Note: Internal Toggle Switches are used to determine if the output 48 V output is to operate a CISCO POE or a Standard POE Device. Essentially the polarity of the Power Plug is reversed

WARNING: CHECK POLARITY OF THE 48V POWER Plugs BEFORE USING THIS OUTPUT

Connection: 2.5 mm power Plug = Blue end = Polarity Controlled by internal B Toggle

2.5 mm power Plug = Red end = Polarity Controlled by internal A Toggle

#### 1.2.2.3 12 V Output

Voltage 12 V DC +/- 0.3 V

Current 2 A DC

Connection: Internal Terminal Block.

Positive = 12 V+

Negative = 12 V-

#### 1.2.3 LOAD Control:

The DC output Voltages are turned on/off by the front panel Toggle Switch. When the Toggle is in the off position, the outputs are off. When in the on position, the outputs are on BUT, will be off if the LVD is active.

#### 1.2.34 BATTERY Test:

With Only the Battery Connected ie: no charging present, the front panel battery test button will light the appropriate LED to indicate the batteries state of charge: High, Med, or Low – recharge ASAP

### 1.3 General Specifications

Nominal Maximum power point tracking to optimize output power.

No User load overvoltage, regulates output voltage to "float" voltage even with no battery connected.

Efficiency: >94% over 20% charging load

Temperature compensated at -4 mv /cell/ deg C

No need for external blocking diode

Transient protected - input and output

Temperature range: -40C to +60C

Internal 25-amp battery fuse.\_

**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.