



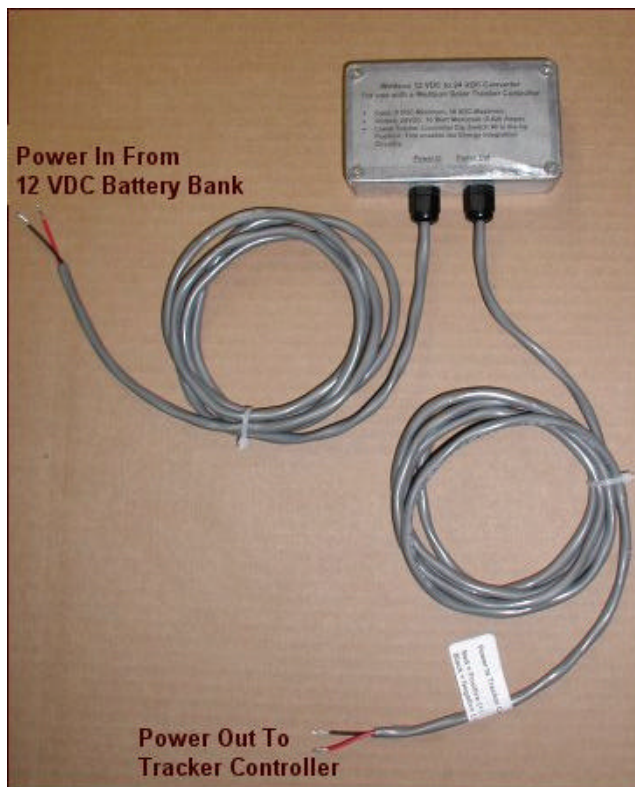
## 12-24 15W LVC: Wattsun Linear Voltage Pre-regulator for 12-Volt Battery Systems (Replaces Wattsun PN W12-30LVC, Effective Jan 2002)

### SPECIFICATIONS:

- ◆ Voltage Input = 9 VDC Minimum, 18 VDC Maximum.  
Power from a 12 VDC battery bank only!
- ◆ Voltage Output at Maximum Input = 24 VDC under load.
- ◆ Output Current Maximum = 15 Watts, 0.625 Amps.
- ◆ Fuse the pre-regulator positive input wire with a 5 amp DC-rated fuse.  
Appropriate fuse to be provided by your installer.
- ◆ All wire color coding is: RED = POSITIVE (+) , BLACK = NEGATIVE(-)

### FUNCTION:

The typical voltage input for a standard Wattsun Tracker Controller is 24 VDC. Battery banks ( or arrays) that have a "working" voltage of only 12 VDC nominal do not provide enough voltage to power the drive motors on large azimuth trackers. The 12-24 regulator boosts the voltage input to meet the requirements of the tracker controller. It must be connected to a 12VDC battery bank to function properly.





#### **INSTALLING THE 12-24 LVC:**

- 1) Disconnect the main battery bank so that no power can flow through any wires you are working on.
- 2) Connect the output wires of the voltage regulator (bottom right two-wire cable) to the input power wires of the Wattsun Tracker Controller. IE: Red to Red (+), Black to Black (-).
- 3) We recommend that you fuse the input of the voltage regulator (bottom left two-wire cable) with a 5 amp DC rated fuse. The fuse is inserted in the positive (Red,+) lead of the 12 VDC battery wire.
4. A) Battery bank connection: Connect the fused input side (two-wire, shorter cable) of the voltage regulator directly to the output of a 12-volt battery bank. Battery positive to fused red input. Battery negative to voltage regulator input negative.
4. B) PV array direct connection: Will not work as intended. Maximum input voltage of 18 VDC will be exceeded and destroy the regulator.
- 5) Reconnect the main battery bank (or fuse) so that power can flow through the voltage regulator and Wattsun Solar Tracker Controller.

#### **WARNING!**

- ◆ **Connection to the output of a 12 VDC nominal module will not supply the proper power the drive motors . The 12-24 LVC can be damaged and cause the Wattsun Solar Tracker Controller or drive motors to fail. Warranty does not cover this damage. Both parts will have to be returned to the factory for repair!**
- ◆ **Never apply power into the 12-24 LVC output wires. Warranty does not cover this damage. Damage can occur and it will have to be returned to the factory for repair!**
- ◆ **A self-resetting fuse is incorporated in the 12-24 LVC. If the output wires touch each other and are shorted, the interior fuse can blow and will disconnect the power output of the regulator. If this happens: Repair the output short then reset the fuse. Disconnecting power to the regulator resets the fuse. Wait a minute for the fuse to cool. Then reconnect power to the regulator.**

#### **CAUTION!**

**CONVERTOR CASE MAY GET VERY HOT UNDER HIGH LOAD OR SHORT CIRCUIT. DO NOT MOUNT TO A FLAMABLE SURFACE SUCH AS WOOD OR OTHER. DO NOT LET CHASSIS COME INTO CONTACT WITH OTHER WIRES AS HEAT MAY MELT INSULATION.**

