Tools & Requirements for Install:
- Wire Cutter / Stripper
  - (12/14/16 gauge stranded)
- Insulated Connector Wire Crimper
- Heat Gun for heat shrink
- Digital Multi-meter (to measure DC – Voltage / Current)

Installation

To connect to your battery - open your battery compartment under the drivers / passenger seat and locate the main battery terminals that provide the car with 48 or 36 volts DC. Diagram is on page three (3).

WIRING Connections:

Solar Panel Connection (Solar EV Cable):
- Panel Cable Red is + / Positive to Yellow Wire - Controller
- Panel Cable Black is - / Negative to Black Wire - Controller

Battery Connections:
- Positive (Red) w/ Fuse Holder
- Negative (Black)

- Always Cut and Crimp / Connect EACH WIRE INDIVIDUALLY
- Heat-shrink each connector carefully to not melt the individual wires

- You may experience a spark when connecting the controller to the main battery terminals – this is 100% normal – the controller does hold a charge from the built in capacitors.
Charge Controller Status Lights

The Solar EV Systems MPPT - Maximum Power Point Tracking Solar Battery Charger a status LED. When you first connect your charger to the battery, The LED will blink red and then green for approximately one second, so that you can confirm that the LED is operational. During operation, the LED blinks green to indicate that your charger is powered and charging, and the LED may blink red to indicate errors.

**Green LED:**

**Short blinks every 2 seconds:** Standby - the battery is connected properly and ready to charge when solar panel power is available.

**Short blinks half second rapid flashing:** Charging (low current, input current less than ~3.5A):

**Long blinks:** Charging, high current, input current more than ~3.5A

**Long then short blink:** The controller is overloaded and limiting input current. Check the solar panel(s) rating is within the charge controllers input specification or contact Solar EV Systems.

**Solid / Constant On:** Battery is fully charged.

**Red LED:**

**Two Blinks:** Controller’s internal temperature is too high

**Three Blinks:** Controller is overloaded – can be caused by changing the solar panel connections while under load or controller is operational.

**Four Blinks:** The controller cannot begin charging due to low battery voltage. Charge the battery by some other means before use.

**Five Blinks:** The controller cannot begin charging due to low battery voltage. Charge the battery by some other means before use.

**Two Long Blinks followed by Two Short Blinks:** Internal Error – Contact Solar EV Systems.

We are committed to serving your solar transportation and portable battery charging needs. Feedback is always welcome on our products.

For technical help or sales please contact your local dealer or Solar EV Systems LLC at 352.377.9554

Please visit www.SolarEVsystems.com additional support and to browse our expanding product line.
### Solar EV Systems - 36/48v MPPT Solar Boost Charge Controller

<table>
<thead>
<tr>
<th>Designed &amp; Manufactured in the USA</th>
<th>SEV36-8-WP</th>
<th>SEV48-8-WP</th>
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</thead>
<tbody>
<tr>
<td>Rated Panel (Input) Current:</td>
<td>8A</td>
<td></td>
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<tr>
<td>Minimum Panel Voltage for Charging:</td>
<td>5V</td>
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<tr>
<td>Minimum Battery Voltage for Operation:</td>
<td>9.5V</td>
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<tr>
<td>Absolute Maximum Panel Open-Circuit Voltage (Voc):</td>
<td>63V</td>
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<tr>
<td>Nominal Battery Voltage:</td>
<td>36V</td>
<td>48V</td>
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<td>Maximum Recommended Panel STS Maximum Power Voltage (Vmp):</td>
<td>41V</td>
<td>43V</td>
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<td>Maximum Recommended Panel Power (8A Panel w/ -155mm cells):</td>
<td>325W</td>
<td>350W</td>
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<td>Bulk Voltage:</td>
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<tr>
<td>Absorption Voltage:</td>
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<td>Absorption Time:</td>
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<td>Float Voltage:</td>
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<td>55.2V</td>
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<td>Battery Temperature Compensation:</td>
<td>-84mV/°C</td>
<td>-112mV/°C</td>
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<td>Electrical Efficiency:</td>
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<td>96% - 99% typical</td>
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<td>Night Consumption:</td>
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<td>5mA</td>
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<td>Tracking Efficiency:</td>
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<td>MPPT Tracking Speed:</td>
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<td>Environmental:</td>
<td>Waterproof</td>
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<td>Connection:</td>
<td>Flying Leads, 16 AWG tinned wire</td>
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<td>Weight:</td>
<td>10.3oz (290g)</td>
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<td>Dimensions:</td>
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<td>Lead-Acid / AGM / GEL / Sealed / Flooded</td>
<td>Battery Auto Sense / Charge</td>
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<td>Fuse Replacement - ATO/ATC 58v/10A</td>
<td>Littlefuse Part# 142.6186.5102</td>
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<tr>
<td>Warranty:</td>
<td>5 Years</td>
<td></td>
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</table>

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### Single Solar Module Wiring Diagram*

**36V / 48V MPPT CHARGE CONTROLLER**

- **RED/FUSED - MAIN BATTERY POSITIVE**
- **BLACK - MAIN BATTERY NEGATIVE**
- **BLACK - SOLAR NEGATIVE**
- **YELLOW - SOLAR POSITIVE**

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*Please consult solar voltage / current input and output specifications of solar charge controller prior to connecting PV modules*
WARRANTY:
Solar EV Systems LLC products are guaranteed to be free from defects in material and/or workmanship and to perform as advertised when properly installed, used, and maintained in accordance with written instructions. Failure to adhere to and/or comply with operation manual instructions will void all associated warranty obligations. Should any part(s)/solar charging systems prove defective within five years from date of purchase, it(they) will be replaced F.O.B. our factory, or branch, without charge provided the defective part(s) is returned to our factory or branch transportation charges prepaid. PURCHASER MUST PROVIDE PROOF OF DATE OF PURCHASE WITH ANY WARRANTY CLAIM.

EXCLUSIONS:
Solar EV Systems LLC will not be responsible for labor charges, loss, or consequential damage of any kind or character caused by defective parts or for charges incurred in the replacement or repair of defective parts by Purchaser. This warranty does not apply when damage is caused by sand or abrasive materials, chemical deposits, collision, unreasonable/unintended use, improper installation, non-approved alteration/modification, corrosion, neglect and acts of god. Careless handling, including that by freight companies, and improper installation or use may void all warranties.

SOLE REMEDY:
Solar EV Systems LLC’s liability under this limited warranty, or in any action whether based upon warranty, contract, negligence, strict product liability or otherwise, shall be the repair or replacement, at Solar EV Systems LLC’s option, of the system or component thereof that Solar EV Systems LLC, deems to be defective. Replacement shall mean furnishing, during the applicable limited warranty period, a new product or factory-reconditioned product or component thereof that is identical or reasonably equivalent to the warranted product or component at no cost to the purchaser. Repair shall mean remedying a defect in the product or component thereof at no cost to the purchaser during the applicable limited warranty period. If Solar EV Systems LLC, elects to repair the product, it may provide factory-reconditioned parts or components. All parts and components replaced under warranty shall become the property of Solar EV Systems LLC.

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NO CONSEQUENTIAL DAMAGES:
IN NO EVENT SHALL Solar EV Systems LLC, BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS RELATED TO PROPERTY OTHER THAN THE SOLAR SYSTEM, LOSS OF USE, LOSS OF TIME, INCONVENIENCE, OR ANY OTHER ECONOMIC LOSS. Some states allow neither limitation on the duration of an implied warranty nor exclusions or limitation of incidental or consequential damages. Therefore, the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

WARRANTY TRANSFER:
The original owner shall have the right to transfer any remaining warranty coverage to one subsequent purchaser only. In order for the original owner to transfer any remaining warranty coverage to a subsequent purchaser, Solar EV Systems LLC, must be notified of such transfer and it must take place within the first year of operation. No transfers of any remaining warranty coverage shall be permitted by any subsequent purchasers.

RETURNS:
A product may be returned within (2) weeks of delivery (prepaid shipping), provided it is returned in 100% original condition and unused. Our products are custom manufactured and a 20% restocking fee (unit invoice price) applies to all returned products.

WARNING:
Any modification or alteration of any solar system beyond factory specifications, including those that affect the performance, structural integrity of the system or electric vehicle can cause serious personal injury or death. This product is built to withstand condensation & rain, however it is not a submersible product. Long term exposure to heavy rain/water can damage/disable your unit. This is not covered under warranty.

Solar EV Systems LLC’s warranty terms and conditions are subject to change without notice. A current copy of our warranty and policies can be requested via mail or via our website. Compatibility is guaranteed with factory golf carts, we cannot guarantee our product’s compatibility with aftermarket products and accessories, such as cabins, seat kits and other modifications to the stock configuration of the golf cart.

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