Power

# EV-500

## 48Vdc Electric Vehicle Charger


- Use solar energy to charge an electric vehicle
- Scalable depending on geographic location and charging requirement
- Zero Carbon Footprint
- Incorporates Maximum Power Point Tracking (MPPT)
- Proprietary Boost topology allows a single PV module to charge a 48Vdc battery pack

Take your commute completely off-grid by charging your Electric Vehicle with the Sun's rays. Alpha Energy has developed a stand-alone solution to charge your Electric Vehicle. This system can be mounted on an existing structure or on its own stand. Alpha's solar charger uses proprietary technology that allows the use of a single PV module to charge a 48Vdc battery pack.

# Alpha EV-500 - 48Vdc Electric Vehicle Charger

| Electrical | |
|---|---|
| Input Voltage Range: | 28Vdc to 45Vdc |
| Input MPPT Voltage Range: | 30Vdc to 45Vdc |
| Panel/Array Open Circuit Voltage (max): | 45Vdc @ 25°C, 54Vdc max (cold) |
| Panel/Array Short-Circuit Current: | < 18A |
| Ouput Voltage-Nominal: | 48Vdc |
| Ouput Voltage Range: | 44Vdc to 60Vdc |
| Output Power-Continuous: | 480W |
| Output Current-Maximum: | 11.5A |
| Typical Efficiency: | 95% |

| Mechanical | |
|---|---|
| Weight (lb/kg): | 2.5 / 1.1 |
| Dimensions (in/mm): | 8 x 6.5 x 3.5 / 203.2 x 165.1 x 88.9 |
| Cooling: | Natural Convection |
| Environment: | Indoor IP41 |
| Mounting: | Wall Mount |
| Operation Temperature: | -40°C to 45˚C / -40°F to 113˚F |
| Storage Temperature: | -40°C to 65˚C / -40°F to 113˚F |
| Termination: | Screw Type Terminal Block |

| Regulatory | |
|---|---|
| Safety: | 22.2 No. 107.1 and UL 1741 |
| Emission: | FCC Class B |
| RoHS compliant: | Yes |

## Using the Sun Hours per Mile Table

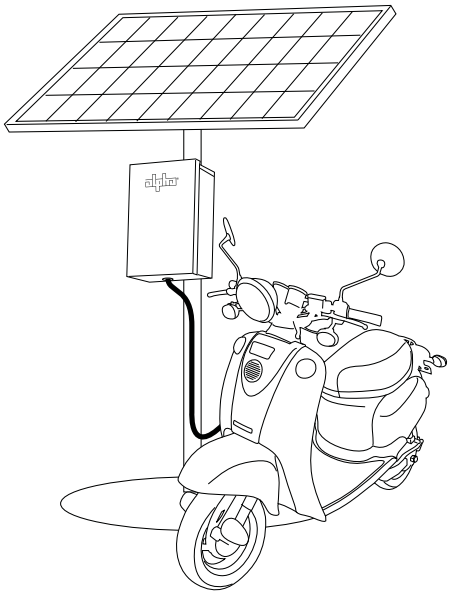
The table below is a guide that approximates how far a BEV Scooter can be driven for each hour of solar charging. It shows the results for one, two and three Alpha PV165 solar modules.

For example, with one hour of sunshine a single PV module will provide sufficient power to drive a BEV around 2 miles. It shows that even with a single PV module and a couple of hours of sunshine a day the scooter can be used for carbon-free neighborhood trips.

## Estimated Mileage Range as an Expression of Power and Sunlight*

| Number of Alpha PV165 modules | Hours of full, direct, unshaded sunlight | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 (165W) | 2 | 3 | 5 | 7 | 8 | 10 |
| 2 (330W) | 3 | 7 | 10 | 13 | 17 | 20 |
| 3 (495W) | 5 | 10 | 15 | 20 | 25 | 30 |
| | Estimated Mileage | | | | | |

*Actual miles per sun hour will vary depending on a wide variety of factors including, but not limited to; weight of driver, cargo carried, amount and grade of uphill driving during the discharge cycle, tire inflation, battery age, angle of PV module, dust and dirt on module, clouds, smog, and charging system wire losses.



Ask about pole-mounted charging solutions.

For contact information visit www.alpha.com

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049-271-10-C003 (09/2008)