

A complete, custom, stand-alone, selfcontained, solar power system designed specifically for the power requirements and location of your application.

Our custom designed systems are engineered to provide a reliable, stable power supply to almost any device, in any location, where electricity is not readily available making them a perfect substitute.

Typical applications for these systems include: lighting, video surveillance, security systems, Wi-Fi access points, gauging & flow monitoring equipment, irrigation control, meteorological & seismic monitoring devices, gate openers, charging points, and much more.



Our systems can provide a wide variety of output voltages such as 12V AC/DC, 24V AC/DC, 36V AC/DC, 48V AC/DC, 120V AC or 240V AC.

Each shipped is pre-programmed and complete to include all of the essential equipment needed for a typical installation. They are designed to be quick and easy to install, with little to no solar installation experience required.

The solar panel size (wattage) and battery size (capacity) is carefully calculated and is determined by the total load (power requirements) on the system, the geographic location of the installation site, and the hours or times the system is in use.

Optional pole and post mount hardware is available for the solar panel and battery enclosure. Systems are typically designed as permanent installations but we can also design systems to be transportable for applications requiring portability and/or rapid deployment.



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## Solar Makes Sense

Using a solar lighting system is often cheaper than trenching cables to remote sites or through parking lots, under roads and sidewalks



No monthly bills for electric usage, meter fees, or taxes.

Federal and local incentives may be available to offset the cost of the system. View our website for current incentives



Renewable energy. Use the suns unlimited power as a clean source of renewable energy.

Green Image. Let people know your company or organization is doing its part in reducing its reliance on unclean energy.



## **Purchase with Confidence**



Established in 2002 with offices and warehouse located in Fort Myers, Florida where we store, assemble, ship, and support our products.



We stand behind our systems with a 20 year limited warranty on the solar panels, and a 10 year limited warranty on the system.



Our superior customer service and support is proven with our A+ rating with the Better Business Bureau.



Techincal support is available for life! We'll be here to assist you with support and troubleshooting if the need arises.











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Systems are supplied with high quality monocrystalline or polycrystalline solar panels with the highest performance and efficiency. They are designed to endure the harshest environments, and are guaranteed to provide power for well over 20 years. Typically manufactured in the USA, Canada, or Germany. The solar panel power is subject to load power consumption and installation location.

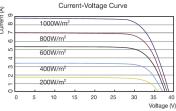
#### **Photovoltaic Module**

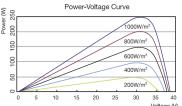
- Solar array power ranges from 10W and up. An array of any size can be designed from a couple watts to many kilowatts depending on the system's power requirements.
- The solar panel power is subject to load consumption, installation location, and illumination period. Please consult our engineers for specific solar power requirements.
- Solar panels can be supplied in a single or dual format (2 x 100W = 200W etc.)
- Typical solar panel life is over 30 years, subject to environmental factors.
- Systems are supplied with highly efficient monocrystalline or polycrystalline solar panels.
- Modules are certified to withstand high wind loads (340PSI) and snow loads (780PSI); and resistance to salt and ammonia.
- Manufactured to national and international standards, verified and certified by independent testing laboratories. (UL, ETL, IEC, MCS, & TUV)
- Most high-power modules will include latching connectors with PV wire for quick connection and the low power modules typically include insolated UV resistant cable.
- All modules are assembled to strict quality control standards; international standards ISO 9001 and ISO 14001.
- 65W panel dimensions: 34.25" x 20.13" x 1.5"
- 90W panel dimensions: 32.35" x 26.22" x 1.5"
- 100W panel dimensions: 40.25" x 26.25" x 1.5"
- 120W panel dimensions: 47.87" x 26.43" x 1.5"
- 170W panel dimensions: 44" x 38.7" x 1.5" (or may be supplied as two 90W panels).
- 200W panel dimensions: 62.18 x 31.87" x 1.5"
- 275W panel dimensions: 64.38" x 39" 1.5"
- 340W panel consists of two 170W panels.

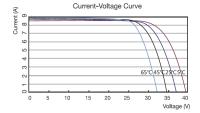






















Lowest Price Guarantee Shipping





"EastPenn batteries are engineered and tested to provide reliable, long-lasting power for Photovoltaic (PV) and renewable energy applications where frequent deep cycles are required and minimum maintenance is desirable."











#### **Battery**

- Variable system voltage depending on application and required battery capacity: 12V, 24V, 36V, or 48V
- Available battery capacities range from 32Ah to 245Ah (per battery).
- Choice of two LA battery types: Absorbed Glass Mat (AGM) or Gel Cell.
   Other battery types, such as lithium, are available at special request.
- Please consult our engineers for your system's specific battery capacity requirements.
- All batteries are classified as Non-spillable (defined by DOT, ICAO and IATA), NonHAZMAT.
- Conforms to ISO9001, ISO/TS 16949, and ISO14001 standards.
- Typical battery life is approximately 5 to 7 years, subject to environmental factors.
- 100% made in the USA.

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#### **VRLA Technology**

VRLA batteries are maintenance free for life. VRLA stands for Valve Regulated Lead Acid, which means the batteries are sealed. Gas will only escape through the safety valves in the case of overcharging or cell failure.

AGM and Gel batteries have exceptional discharge recovery, even after deep or prolonged discharge. However, it should be noted that repetitive deep discharge and prolonged deep discharge have a negative influence on the service life of all lead acid batteries.

Gel batteries in general have a longer service life and better cycle capacity than AGM batteries.

Please Note: The rated capacity of our AGM or gel deep cycle batteries refer to 20 hour discharge rate (i.e. 0.05CA). Most products actually operate near, or at a 100 hour discharge rate (i.e. 0.01CA) and thus actual available battery capacity is slightly higher than the advertised rate.

The total available battery power is measured in watt-hour (Wh) or V\*Ah. When comparing battery capacity, note that the battery capacity from a 12V system is not interchangeable with the battery capacity of a 24V system. However, the total battery power (i.e. watt-hours) is always comparable provided the correct system voltage is considered during calculation.

Lowest Price Worldwide Shipping









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Charge controllers available from 10A to 100A, capable of handling array voltages up to 250VDC, and battery bank voltages from 12V to 48V.











\*Real time data monitoring, 30 day performance history, and user programmability from Apple or Android smartphones.

#### **Load Control**

The comprehensive load control system allows for extensive configuration, including dynamic activation and on some models optional dimming for some lighting. Load activation is controlled by the charge controller and solar panel.

### **Load Control Relay**



For high current load control applications, our full programable load control relays can handle up to a maximum of 220A.

## Maximum Power Point Tracking

Supplied standard with the most advanced and sophisticated MPPT charge controller technology. Allowing for full system programmability and load control; with intelligent battery management. MPPT technology increases power generation by up to 30% during inclement periods, and intelligent battery management provides extended battery life and extra protection against excessive discharge.

#### **MPPT Control Module**

- The MPPT controller offers full programmability of load output: dusk to dawn, multi-timed mode, and programable low voltage disconnect.
- For high current loads the charge controller can activate and deactivate solid state relays based on internal programming to control DC power delivery and/or AC power delivery to loads.
- Intelligent battery management software is used to protect the battery from being excessively discharged. The controller will monitor the state of charge on the battery, and if needed, day by day slightly increase the load disconnect level (i. e. disconnect the load earlier) until the harvested solar energy is sufficient to recharge the battery to nearly the full 100% at least once a week. Allowing for the longest life possible from the batteries.
- Controller size and ratings are subject to solar panel and battery specifications.
- \*All models support real time data monitoring, 30 day performance history, and user programmability from Apple or Android smartphones, tablets, etc. On some models use of this feature requires the optional MPPT Bluetooth Dongle.















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## **Battery Enclosures**

We stock several types of battery enclosures, ranging from various sizes and construction materials. The type of battery enclosure provided will depend on the size of the batteries required, and/or how the battery enclosure needs to be mounted. All battery enclosures are weather rated, designed for interior or exterior installation.

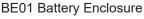


BE05

BE04

BE08





- Plastic construction.
- Supplied with outlets or cable glands dependent on system requirements.
- Hinged lockable lid (padlock not included).
- Dimensions: 12 3/16" x 9" x 6 1/2" (310mm x 225mm x 165mm)

#### BE02 Battery Enclosure

- Galvanized steel construction.
- Fitted with 4 outlets, and one solar panel input.
- Hinged lockable lid (padlock not included).
- Dimensions: 13" x 9 7/8" x 8 7/8" (330mm x 250mm x 225mm)

#### BE03 Battery Enclosure

- Galvanized steel construction.
- Fitted with 8 outlets, and one solar panel input.
- Hinged lockable lid (padlock not included).
- Dimensions: 18 1/8" x 14 3/8" x 11 3/16" (460mm x 365mm x 284mm)

#### **BE04 Battery Enclosure**

- Galvanized steel construction.
- Knock-out holes on the bottom and side of enclosure.
- Hinged lockable door (padlock not included).
- Pole mount option.
- Dimensions: 9 7/8" x 16 1/5" x 24" (250mm x 420mm x 610mm)

#### **BE05 Battery Enclosure**

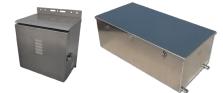
- Galvanized steel construction.
- Hinged lockable door (padlock not included).
- Cable entry hole on the back of the enclosure.
- Dimensions: 20 1/2" x 13 5/8" x 33" ( 521mm x 345mm x 838mm)

#### BE08 Battery Enclosure

- Galvanized steel construction.
- Knock-out holes on the bottom and side of enclosure.
- Hinged lockable door (padlock not included).
- Pole mount option.
- Dimensions: 16 3/4" X 12 7/8" X 12 1/2" (423mm X 327mm X 318mm)

Custom Battery Enclosures - Special Order Item

- Aluminum / stainless steel construction.
- Knock-out holes / glands on the enclosure.
- Hinged lockable door (padlock not included).
- Dimensions: Vary depending on battery requirements.



**Custom Battery Enclosures** 













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Each solar panel is supplied with a pair of metal mounting triangles. These triangles allow the installer to mount the solar panel at an appropriate angle to a solid vertical or horizontal surface (such as a wall or concrete pad).

The panels can be installed in numerous ways, but note that the solar must be mounted at an appropriate angle (15° plus site latitude), face due south for the northern hemisphere and north for the southern hemisphere, and be in clear view of the sun (with no shading).

#### **Optional Battery Enclosure Mounting Hardware**

If you need to mount your battery enclosure to a round post or pole, you can purchase our optional battery enclosure pole mount hardware kits.

#### **SP13**

The SP13 battery enclosure pole mount kit can be used to mount our BE02, or BE03 to a round pole or post. Pole diameter options vary between 2" to 8" diameter.





## **Optional Solar Panel Mounting Hardware**

Below are solar panel pole mount options that can be purchased as an optional extra.



Can accomodate panels up to 39" wide

Can accomodate one or two

#### SP04 / SP08

SP04 can accomodate panels



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Lowest Price Guarantee

Worldwide Shipping

10 Year System Warranty

20 Year

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Lifetime\* Tech Support

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SUBJECT TO OUR TERMS & CONDITIONS, AND RETURNS POL

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