



LV Energy Systems: Mobile Solar Charging Bundle

Material Cut Sheets

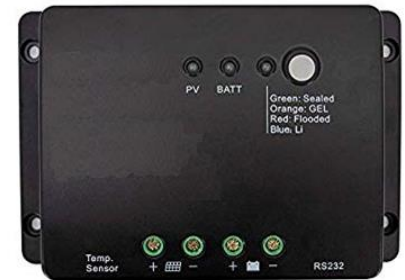
- 1. Pulse Width Modulation Unit**
- 2. Solar Panel & MC4 Connectors**
- 3. Battery Unit**
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1. 30A Pulse Width Modulation Unit

30A PWM is a solar charge regulator that increases battery life and system performance. Designed for ease of use with LED indicators for charge status and battery information. It features an RS232 port and Lithium battery charging to monitor and adjust your solar system remotely. With the inclusion of the Lithium Battery Mode, the 30A negative-ground controller is now capable of charging various 12V battery types and banks, including most 12V lithium models available on the market.

Component Specifications

Nominal Voltage:	12 VDC
Max. PV Input Power:	400W
Rated Charge Current:	30A
Max. PV Input Voltage:	25 VDC
Self-Consumption:	<10mA
High Voltage Disconnect:	16V
Boost Duration:	120 min
Temperature Compensation:	-3mV/°C/2V
Working Temperature:	-20°F - 113°F
Storage Temperature:	-31°F - 176°F
Max Gauge Size:	Up to 8AWG
Dimensions:	6.45 x 4.31 x 1.76 inches
Weight:	0.65 lbs.
Enclosure:	IP20



2. 50 Watt 12 Volt Monocrystalline Solar Panel

The 100 Watt 12 Volt Monocrystalline Solar Panel delivers high power with compact size. This 100W solar panel is perfect item for single appliance power applications.

- Advanced encapsulation material with multi-layered sheet laminations to enhance cell performance and provide a long service life.
- EL tested solar modules; no hot-spot heating
- Bypass diodes minimize power drop caused by shade and ensure excellent performance in low-light environments.
- TPT back sheet ensures smooth performance over a long period of time.
- Guaranteed positive output tolerance (0-3%); withstands high winds (2400Pa) and snow loads (5400Pa).
- Corrosion-resistant aluminum frame for extended outdoor use, allowing the panels to last for decades.
- Anti-reflective, high transparency, low iron-tempered glass with enhanced stiffness and impact resistance.
- IP65 rated junction box provides complete protection against environmental particles and low pressure water jets.
- Ground mount compatible.
- Pre-drilled holes on the back of the panel allow for fast mounting, securing and grounding.
- 25 Year Power Output Warranty; 5 Year Hardware Warranty; 1 Year Limited Accessories Warranty



Max Power at STC (P_{max})	50 W
Open-Circuit Voltage (V_{oc})	22.4 V
Short-Circuit Current (I_{sc})	2.95 A
Optimum Operating Voltage (V_{mp})	17.8 V
Optimum Operating Current (I_{mp})	2.84 A
Temp Coefficient of P_{max}	-0.44%/°C
Temp Coefficient of V_{oc}	-0.30%/°C
Temp Coefficient of I_{sc}	0.04%/°C
Max System Voltage	600VDC (UL)
Max Series Fuse Size Rating	15 A
Fire Rating	Class C
Weight	5kgs / 11lbs
Dimensions	550x680x30mm / 21.6x26.7x1.2in
STC Irradiance	1000 W/m ² , T = 25°C, AM=1.5

WARNING: This module produces electricity when exposed to light. Please follow all applicable electrical safety precautions. Only qualified personnel should install or perform maintenance work on these modules. Beware of dangerously high DC voltages when connecting modules. Do not damage or scratch the rear surface of the module. Follow your battery manufacturer's recommendation.



3. Battery Unit

Deep Cycle 12V SLA Battery with 6 Cells

Brand Name	Power-Sonic
Manufacturer	Power-Sonic Corporation
Manufacturer Part Number	PDC-1275
Product Model	PDC-1275
Product Type	Battery
Weight	5.51 lbs.,
Manufacturer Website Address	http://www.power-sonic.com
Product Line	Deep Cycle
Product Name	Deep Cycle PDC-1275 Automotive
Product Series	PDC



Battery Capacity	7500 mAh
Battery Chemistry	Sealed Lead Acid (SLA)
Battery Rechargeable	Yes
Battery Size	Proprietary Battery Size
Number of Cells	6
Output Voltage	12 V DC
Dimensions HWD	3.9" x 5.9" x 2.6"
Environmental Certification	WEEE

4. AC DC Inverter

12V DC to 110-120V AC Inverter with standard US AC sockets and USB Charging Outlets. Integrated cooling fan and ventilated housing help dissipate heat.

Rated Power	400W
Maximum Power	500W
Peak Power	1000W
Input Volts	DC 12V
Output Volts	AC 110-120V
USB Output	2x DC 5V 4.2A; 1x DC 5V 2.4A; 1x DC 5V 0~2.4A
Fuses	Built-in replaceable 30A/32V fuses
Other	Replaceable cooling fan
Dimensions	6" x 5" x 2"



5. Enclosure

Plastic ABS NEMA Enclosure is IP66 rated for outdoor use. It meets IEC 529 and NEMA 1, 2, 4 and 4x. Lightweight polycarbonate construction including hinge pins. Light gray finish. It includes stainless steel wall mounting brackets and hardware. Dimensions: 16.3" x 13" x 7.6" Weight: 0.16 ounces.

6. Connection Guide

