

# ENERGY SYSTEM DATA SHEET

Read this data sheet carefully and ensure you have fully understood its contents before operating this device for the first time



PRODUCT	PRODUCT CODE	SPEC: SHORT
AC Energy System	ACLEVEL1	12/0,85kVA



SPECIALIZED SOLAR SYSTEMS®  
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## ENERGYDOCK LEVEL 1

This unit is recommended for powering your laptop / desktop, charging your cell phone, running lights, a TV, DSTV decoder and small appliances.

It is fitted with a Super Cycle battery. It has more than 300 cycles at 100% depth of discharge (DoD) when discharged to 10.8V with  $1 = 0.2C_{20}$ , followed by approximately two hours rest in discharge condition, and then a recharge with  $1 = 0.2C_{20}$ .

The battery will produce at least 700 cycles at 60% DoD (discharge during three hours with  $1 = 0.2C_{20}$ , immediately followed by recharge at  $1 = 0.2C_{20}$ ).

It can produce at least 1000 cycles at 40% DoD (discharge during two hours with  $1 = 0.2C_{20}$ , immediately followed by recharge at  $1 = 0.2C_{20}$ ).



## POWERBACK INVERTER PB1500L SPECIFICATIONS

POWERBACK INVERTER PB1500L SPECIFICATIONS	
MODEL	PB1500L
CAPACITY	1500 VA / 1050 W
<b>INPUT:</b>	
VOLTAGE	230 VAC
VOLTAGE RANGE	180-260 VAC (For personal computer)
	100-300 VAC (For home appliances)
<b>OUTPUT:</b>	
VOLTAGE REGULATION (Battery mode)	230 VAC $\pm$ 10%
TRANSFER TIME	20 ms TYPICAL
WAVEFORM	SIMULATED SINE WAVE
<b>BATTERY:</b>	
BATTERY VOLTAGE	24 VDC
FLOATING CHARGE VOLTAGE	27.4 VDC $\pm$ 2%
MAXIMUM CHARGE CURRENT	20 A



## TROUBLESHOOTING

PROBLEM	POSIBLE CAUSE	SOLUTIONS
Utility power is normal but the unit is in battery mode	AC input power cord is not connected properly	Chc AC input power connection
	Input breaker is activated	Reset the input breaker
When power fails, the backup time is shortened	The unit is overloaded	Remove some non-essential loads
	Battery voltage is too low	Charge the unit for at least 8 hours
	Battery capacity is not full, even after charging the unit for at least 8 hours	Check the date code of the battery. If the batteries are too old, replace the batteries
Nothing displayed on the front panel when the utility power is normal	The unit is not turned on	Press power switch to turn on the unit
	Battery is not properly connected	Check the external battery cable and terminal. Make sure all the battery connections to the unit is correct.
	Battery defect	Replace the batteries
	Battery voltage is too low	Charge the unit for at least 8 hours
The unit is in fault and restarts circulary	The unit is overloaded	Verify that the load matches the capability specified in the specification
	Output is short circuited	Check the loads and remove loads which are causing the short circuit

If any other abnormal situation occur which aren't listed above, please call the service supplier.

**AC ENERGY SYSTEM DATA SHEET - 12/0.85kVA (ACLEVEL1)**

**SPECIALIZED SOLAR SYSTEMS (PTY) LTD., (SSS) -- WARRANTY CONDITIONS**

This Limited Warranty applies to the Products and Systems sold and/or installed by Specialized Solar Systems (SSS) or an affiliated company. SSS warrants the quality of such Systems and specifies the scope of such Warranty.

1. **1 (one) Year Limited Warranty**  
SSS warrants the equipment installed and workmanship to be free from defects and/or failures specified below for a period not exceeding 1 (one) year from the date of installation of such equipment:
  - i) Defects and/or failures due to manufactured items;
  - ii) Defects and/or failures due to materials.
  - iii) Defects and/or failures due to faulty workmanship.
  - iv) Batteries are subjected to a power usage factor of 0.2C over 3000 cycles or 5 years (whichever comes first), at a temperature that is less than 45° C.
  - v) Programming: Energy systems are optimally setup in factory production. Changing any of these settings will void the energy systems warranty.

In the event of any of the above defects and/or failures, SSS will arrange for the repair/replacement of such systems/components at its sole discretion. This may include the repair/replacement of the system/components with new/replacement components.
2. **Warranty Exclusions**
  - i) No claim based on this Limited Warranty may be brought after the applicable Warranty period;
  - ii) Any repair/replacement of systems/components shall not extend the original terms of this Warranty.
  - iii) The customer is responsible for ensuring a valid electrical Certificate of Compliance is obtained for a specific site/premise, prior to SSS conducting any installation of systems on that specific site/premise. Failure of the customer to comply with this requirement will invalidate this warranty.
3. **This Limited Warranty shall not cover defects and/or failures of systems/components from the following causes, even though such defects and/or failures are discovered within the applicable Warranty period:**
  - i) Defects and/or failures caused by devices and/or parts other than the systems/components supplied/installed by SSS;
  - ii) Defects and/or failures caused by defective wiring, installation, or handling by parties other than SSS;
  - iii) Defects and/or failures caused by installations not in conformance with SSS system/component specifications, installation manuals or operation manuals;

- iv) Defects and/or failures caused by unauthorized maintenance, operation or modification;
  - v) Defects and/or failures caused by removal from the original place of installation;
  - vi) Defects and/or failures caused by repairs not in accordance with SSS' instructions;
  - vii) Defects and/or failures caused by inappropriate handling during transportation and storage;
  - viii) Defects and/or failures caused by external accidents such as fire and explosion;
  - ix) Defects and/or failures caused by natural forces, acts of God, or force majeure events and other unforeseen circumstances or causes beyond SSS' reasonable control, including but not limited to, earthquakes, hurricanes, typhoons, tornadoes, floods, lightning, storm damage, snow damage, etc.;
  - x) Defects and/or failures caused by smoke and/or other pollution, salt damage, acid, rain, etc.;
  - xi) Unauthorized tampering with any part of the system/components.
4. This Limited Warranty does not cover the transportation cost for reshipment of any repaired or replaced system/components to the applicable location, and does not cover the transportation cost for the return of the system/components to SSS or SSS' authorized agents and costs associated with installation, removal or re-installation of the system/components, where such system/components are not installed by SSS or an authorized SSS agent.
  5. This Limited Warranty is transferrable to a new owner of a location where the system/components were originally installed, provided that the system/components remain installed at the location where originally installed.
  6. **Warranty Limitations**  
The Limited Warranty set forth herein is expressly in lieu of and excludes all other express or implied warranties including, but not limited to, warranties of merchantability and fitness for a particular purpose and all other obligations or liabilities on the part of SSS, unless such other warranties, obligations or liabilities are expressly agreed to in writing by SSS. SSS shall have no responsibility or liability whatsoever for damages or injury to persons or property, or for other loss or injury resulting from any cause whatsoever arising out of or relating to the systems/components including, without limitation, any defects and/or failures in the systems/components or from use or installation.  
Beyond this SSS shall not be liable under any circumstances for any incidental, indirect, consequential or special damages howsoever caused. In no event shall SSS' aggregate liability exceed the value of the system/component which is the subject of a claim or dispute.  
This Limited Warranty shall be valid until a new revision is issued by Specialized Solar Systems.

ENERGYDOCK  
LEVEL  
01



SPECIALIZED SOLAR SYSTEMS® **QUALITY CONTROL**

<b>COMPONENT NAME:</b>		<b>ASSEMBLER NAME:</b>	
<b>COMPONENT SERIAL NO:</b>		<b>QUALITY CONTROLLER NAME:</b>	
<b>- CHECKLIST -</b>			
<b>PASS</b>	<b>TEST PROCEDURE</b>	<b>QUALITY CONTROLLER INSPECTION</b>	<b>COMMENTS</b>
	Switch unit on		
	Measure battery voltage		
	Switch 220V supply on		
	Observe voltage increase		
	Put load on for ± 3 minutes		
	Switch 220V supply off		
	Alignments		
	Observe that the load still operates		
	Indicator light for battery is on		
	220V Supply indicator light off		
<b>SIGN-OFF:</b>		<b>DATE:</b>	





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