

SHPS-200E

Smart Hybrid Power System: Integrated Telecom Grade Smart Power System

OVERVIEW

VNL's Smart Hybrid Power System (SHPS) is an integrated, telecom-grade power system suitable for both solar and mains operations. Packaged in industry-standard, rack-based installation, it is designed to operate both indoors and outdoors, with no need for shelter and air conditioning.

Our power system has an IP enabled unit that intelligently monitors and regulates charging/discharging of batteries and can be managed remotely. With a capacity to load power up to 200W, it extends alarms and control of external devices to central OMC.

Serves a variety of market segments including:

Rural and Remote Communities usually deprived of mobile services due to accessibility challenges

Remote Areas like off-shore oil fields, and sparsely populated communities usually deprived of mobile services due to lack of grid power

Low ARPU Areas where average revenue per user is too low to justify for infrastructure maintenance and power expenses

Telecom Enterprises which require a low-cost power solution with centralised monitoring system

BENEFITS

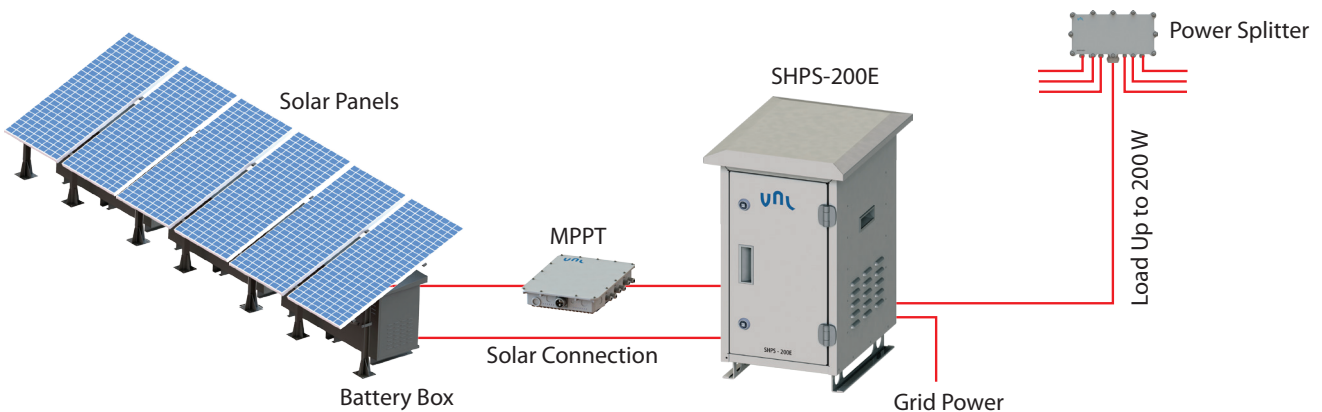
- Protection against short circuit, overload, high voltage and reverse battery connection
- Integrated fire detection
- Intelligent monitoring of critical operational parameters
- External alarm & control extension to central OMC
- Management over IP
- Designed for outdoors; works without air conditioning



SHPS-200E

HIGHLIGHTS

- Simple Installation - Plug and Play
- Local and Central Fault Reporting
- Enhanced Battery Life with Temperature Compensated Charging and Protection Against Overcharge & Deep Discharge
- Remote Software Management
- Enhanced Service Availability with Redundant Design
- MPPT-based Technology (Optional)



Application Diagram : SHPS-200E

Related Products: SHPS-500, SSPS-500, SSPS-200

SHPS-200E

SPECIFICATIONS

SYSTEM	
Type	Outdoor
Power Modules	Dual, Redundant, Hot-Swappable
Dimensions (HxWxD)	550 x 335 x 440 mm
Weight / Volume	28Kg / 73.3 L
No. of Solar Input Supported at MPPT Module Input	6 (Max 300 W Each Port)
Solar Panel Rating	Upto 300 W
24 V Load Module for VSAT	60 W Max.
VSAT Space (H xWxD)	200 x 35 x 266

AC INPUT	
Voltage	90VAC to 270VAC Nominal
Frequency	48-52 Hz / 60 Hz
Peak Input AC Power	250 VA
Rectifier Efficiency	> 94%
Short Circuit Protection	Yes
Under Voltage & Over Voltage Protection	Yes
SPD and TVSS Protection	Yes

DC INPUT	
Solar Input Ports	1
Solar Input Current per Port	20A Max.
Solar Input Voltage	60 V Max.
Battery Ports	1
Battery Voltage	56.4 V Max.
Battery Current per Port	60A Max.
SPD and TVSS Protection	Yes

DC OUTPUT	
DC Output Port	1
DC Output Voltage	±48V (44.4 to 56.4V)
Current Rating	4.5A Max.
SPD and TVSS Protection	Yes

SMPS (ECU)	
Modules	2
Rated Input AC Power per Module	250 VA
Output Voltage	42 - 58.4V Max.
Output Current per Module	4.5A Max.
Protection per Module	Over Load, Under Voltage, Short Circuit
LED Indications	AC In, Fan Fail, Load Status, SMPS Fault
Thermal Shut Down	Yes

USER INTERFACE	
RS485 Port	1 x Isolated Full Duplex Up to 230400 Baud
10/100 Mbps Standard Ethernet Port	5 x Standard RJ45
10/100 Mbps Standard Ethernet Switch with Configurable 48V PoE	1 PoE (Optional)
Fast Ethernet Optical Port	2 Optical (Optional)
2 AUX Output Ports	2A, 230V Potential Free Relay
2 AUX Input Ports	Optically Isolated, Up to 15V in, 10mA
LCD Graphics (124 x 64)	Display All Parameters (Optional)
Alarm & Indications	Interfaces to OMC, Alarm and Display Unit over Ethernet for Alarm & Indicators Display and System Info.

POWER SPLITTER	
Type	2 Way, Passive
Capacity	10A / 60V Max.
Water and Dust Protection	IP 65

MPPT	
Type	Active MPPT Based Technology
Capacity	1800 W Max.
Water and Dust Protection	IP 65
Solar Panel Supported	6

ENVIRONMENTAL & SAFETY	
Temperature Range (Full Performance)	-15° C to 55° C (5° F to 131° F)
Storage Temperature	-20° C to 60° C (-4° F to 140° F)
Relative Humidity	15% to 100%
Safety	IEC 60950
EMI/EMC	Complies with Class A of EN 55022, IEC61000-4-2 for ESD IEC61000-4-3 for Radiated RF Immunity IEC61000-4-4 for EFT IEC61000-4-5-04 for Surge Immunity IEC 61000-4-6 for Conducted RF Immunity
Ingres Protection Level	IP55 (IP65 Option Available)
Mechanical	ETSI EN 300 019-1-2 Class 2.3 Public Transportation QM 333cat B2

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