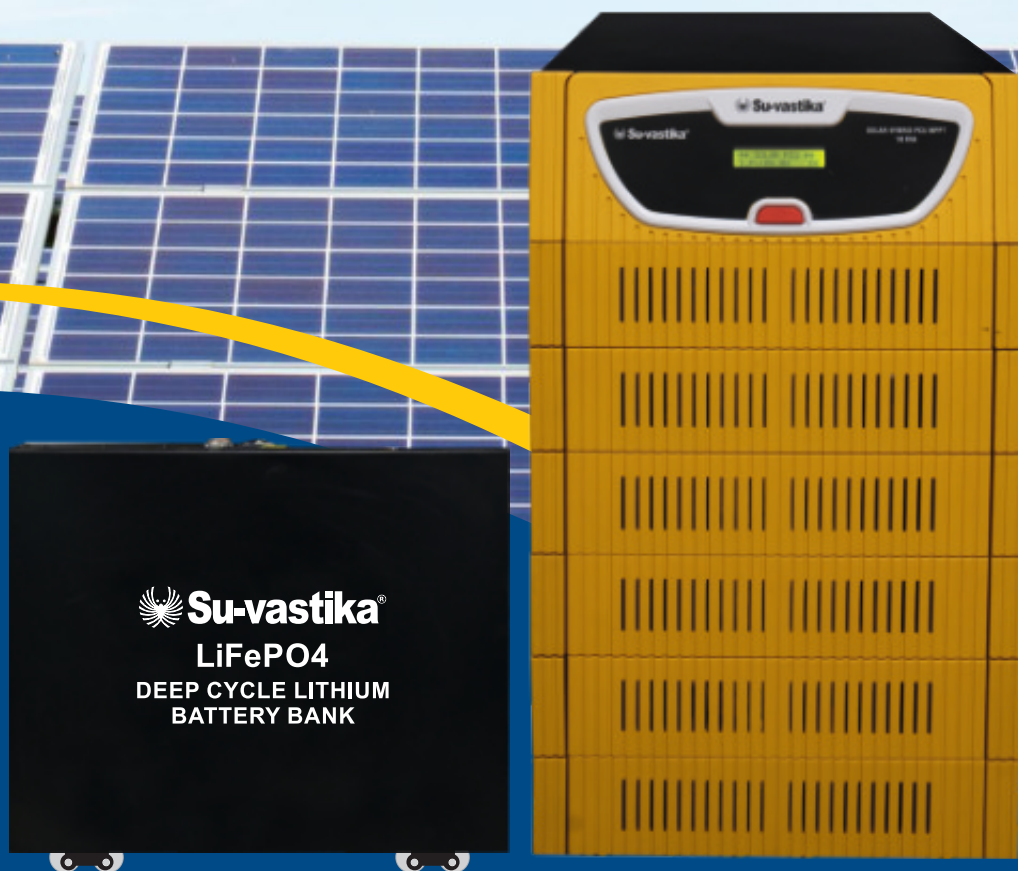


SOLAR HYBRID PCU MPPT
WITH LiFePO4
LITHIUM BATTERY BANK (1P-1P)
ENERGY STORAGE SYSTEM



MPPT 10KVA with LiFePO4 Lithium Battery Bank 9KW

Available Models:

MPPT 1500/12V with LiFePO4 Lithium Battery Bank 1280Wh
MPPT 2500/24V with LiFePO4 Lithium Battery Bank 2.56KWh
MPPT 5500/48V with LiFePO4 Lithium Battery Bank 5.12KWh

INTRODUCING THE FUTURE OF POWER BACKUP

Our Solar MPPT UPS with Retrofit Lithium Battery Experience the pinnacle of power reliability and efficiency with our cutting-edge Solar MPPT UPS equipped with retrofit lithium battery technology. Designed to cater to a wide range of applications, from residential homes to commercial establishments and industrial facilities, our UPS offers unparalleled performance and versatility.

LITHIUM BATTERY TECHNOLOGY: A SUPERIOR CHOICE

At the heart of our UPS lies the cutting-edge lithium battery technology, offering a significant advantage over traditional tubular batteries.

KEY ADVANTAGES:

Superior Performance: Lithium batteries deliver exceptional performance, providing reliable and consistent power output.

HIGHER ENERGY DENSITY:

- **Compact Design:** Lithium batteries store more energy in a smaller footprint, allowing for a more compact and efficient UPS design.
- **Increased Capacity:** Higher energy density means the UPS can provide longer backup times on a single charge.



LOWER SELF-DISCHARGE:

- **Reduced Maintenance:** Lithium batteries have a lower self-discharge rate, meaning they retain their charge for longer periods, minimizing the need for frequent recharging.
- **Improved Reliability:** Lower self-discharge ensures that the UPS is always ready to provide backup power when needed.



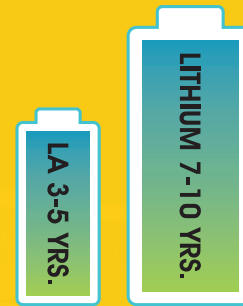
FASTER CHARGE AND DISCHARGE:

- **Quick Recovery:** Lithium batteries charge and discharge more rapidly than traditional batteries, allowing for faster recovery from power outages and more efficient energy usage.
- **Improved Response Time:** Faster charging and discharging capabilities ensure a quicker response to power fluctuations.



LONGER LIFESPAN:

- **Reduced Replacements:** Lithium batteries have a significantly longer lifespan compared to traditional batteries, reducing the frequency of battery replacements and associated costs.
- **Increased Reliability:** A longer lifespan ensures consistent and reliable power backup over time.



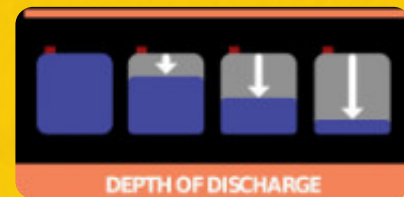
WIDER OPERATING TEMPERATURE RANGE:



- **Reduced Maintenance:** Lithium batteries have a lower self-discharge rate, meaning they retain their charge for longer periods, minimizing the need for frequent recharging.
- **Improved Reliability:** Lower self-discharge ensures that the UPS is always ready to provide backup power when needed.

DEEP DISCHARGE CYCLES:

- **Enhanced Durability:** Lithium batteries are designed to handle deep discharge cycles without compromising their performance or lifespan.
- **Reliable Backup:** This capability ensures that the UPS can provide extended backup power during prolonged power outages.



SMOOTH AND UNINTERRUPTED BACKUP: POWERING THROUGH CHALLENGES

Our UPS is engineered to provide a seamless transition between mains and battery power, eliminating disruptions and ensuring a smooth and uninterrupted power supply.

- **Instantaneous Switching:** The UPS automatically switches to battery power within milliseconds of a power outage, minimizing downtime.
- **Pure Sine Wave Output:** Delivers clean, stable power that is compatible with a wide range of sensitive electronic devices.
- **Advanced Charging Technology:** Optimizes battery charging efficiency and prolongs battery life.

KEY FEATURES AND BENEFITS OF LITHIUM ENERGY STORAGE SYSTEM

- **Versatile Compatibility:** Runs all types of loads, from residential to industrial, ensuring uninterrupted power supply.
- **Lithium Battery Technology:** Offers superior performance, longer lifespan, and faster charging compared to traditional tubular batteries.
- **Smooth and Uninterrupted Backup:** Provides seamless power transition between mains and battery, eliminating disruptions.

1. Su-vastika Bluetooth/WiFi Monitoring App

Su-vastika Bluetooth/WiFi Monitoring App Su-vastika Lithium system comes with Bluetooth and WiFi app that helps to monitor and control UPS through Mobile app or direct PC and loaded with the patented software.

This feature offers many advantages over regular Inverters/UPS.

- **Remote monitoring:** With Bluetooth and WiFi, you can monitor your UPS from anywhere worldwide, as long as you have an internet connection. This is ideal for homeowners who want to keep an eye on the power situation at home or office while they're away.
- **Real-time data:** Bluetooth and WiFi-enabled UPS can provide real-time data on your Inverter/UPS system performance. This data can be used to optimise your system's performance and troubleshoot any problems.
- **Inbuilt Digital Warranty:** The Digital Warranty gives you peace of mind as you don't need to keep any documents, and it works inside the microprocessor. The warranty works with the usage of the Inverter/UPS and not from the day you purchase the product.
- **Voltage and frequency:** In case of low or high Voltage, one can have the data recorded for the high and low voltages.
- Shows charging percentage of the battery

2. Smart and Convenient Digital Warranty:

Su-vastika's Digital Warranty: Say goodbye to lost paperwork and unfair coverage. This smart application tracks real usage, starting when your PCU powers on and pausing when it is off. Enjoy worry-free protection with Bluetooth/ Wi-Fi access to your warranty status anytime, anywhere.

Paperless Digital Warranty just pure peace of mind.

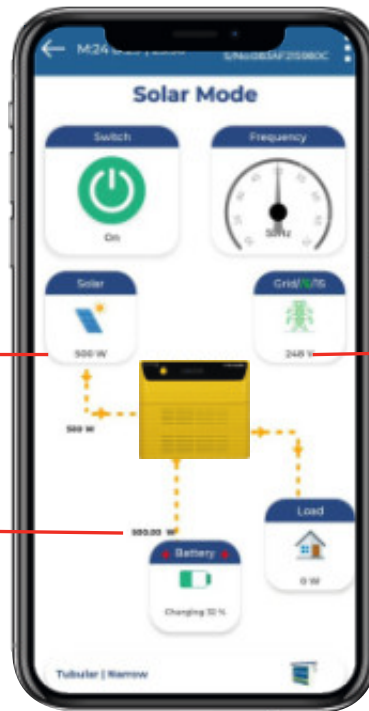


3. Take control of your power with a single glance.

Our innovative app delivers a real-time dashboard of your UPS, unveiling its hidden potential. Monitor battery health, track solar energy harvesting, and see if the grid's playing nice – all in one convenient interface. No more guessing, no more surprises, just complete power awareness at your fingertips.

Solar Priority Selection - Automatic

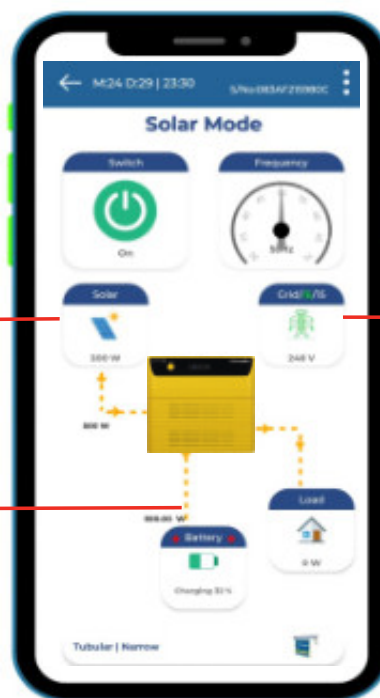
500W Power is required for battery charging which is Available from Solar, So all required power is taken from Solar and disconnected from the Mains.



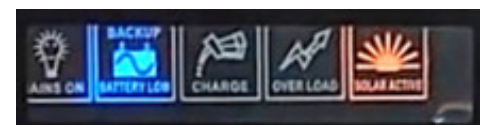
Mains are available but not connected by UPS because the required power for battery charging is sufficient from Solar.

Solar Priority Selection - Automatic

500W Power is required for battery charging which is Available from Solar, So all required power is taken from Solar and disconnected from the Mains.



LED Indication of Solar PCU when Mains is available but Solar PCU is working on solar mode with



Mains are available but not connected by UPS because the required power for battery charging is sufficient from Solar.

Smart Battery Management System (BMS)

Intelligent BMS for Smarter Energy

The **Smart Battery Management System (BMS)** is the brain of the Su-vastika Lithium battery Banks. All Lithium batteries of Su-vastika come with BMS.

It **monitors, protects, and optimizes** performance, ensuring your backup power is always safe and reliable.

Key BMS Features

01

Cell Balancing

Maintains equal charge across all battery cells.

- Prevents cell imbalance.
- Extends battery life and ensures consistent performance

02

SOC (State of Charge) Monitoring

Shows **real-time battery charge percentage**, giving you accurate backup time visibility.

03

SOH (State of Health) Tracking

Monitors long-term battery health and predicts remaining useful life, **reducing the risk of unexpected failures.**

04

Real-Time Monitoring via App

Track live data such as **voltage, current, temperature, and SOC** using your **phone or laptop.**

05

Safety Automation

Automatically disconnects charging or discharging during unsafe conditions like **overheat, over-voltage, or deep discharge.**

With Smart BMS, you get a longer-lasting, safer, and more efficient battery system.

Benefits of Lithium Batteries Over Traditional Tubular Batteries

KEY FEATURES AND BENEFITS

- **Longer Lifespan:** Lithium batteries have a significantly longer lifespan compared to tubular batteries, reducing replacement costs and maintenance.
- **Faster Charging:** Lithium batteries charge much faster, ensuring quicker recovery from power outages.
- **Higher Energy Density:** Lithium batteries store more energy in a smaller space, making them more efficient and compact.
- **Lightweight:** Lithium batteries are lighter than tubular batteries, reducing the overall weight of the UPS system.
- **Maintenance-Free:** Lithium batteries require minimal maintenance, unlike tubular batteries that may need regular topping up of electrolyte.
- **Improved Performance:** Lithium batteries offer better performance in extreme temperatures and provide a more stable power supply.

ADDITIONAL SELLING POINTS:

01

MPPT Technology:

Ensures maximum power extraction from solar panels, increasing efficiency.

02

Retrofit Capability

Easily integrates with existing UPS systems, providing a cost-effective upgrade.

03

Environmentally Friendly

Lithium batteries are more environmentally friendly than traditional lead-acid batteries.

Technical Specification

Model Name MPPT		1500 BLE	2500 BLE	5500 BLE	
Display Type		LED			
LED Display Features					
Mains On	Backup	Charge	Overload	Solar available	Low Battery
Battery Low Protection	Overload Protection	Short Circuit Protection	Mains Trip Protection	Solar Not available	High Temperature Protection
INPUT PARAMETERS					
Phases		1 Phase 3-Wire			
I/P AC Voltage Range	UPS Mode	180VAC-260VAC ± 10VAC	180VAC-260VAC ± 10VAC	180VAC-260VAC ± 10VAC	
	W-UPS Mode	85VAC -95VAC ± 10VAC	85VAC -95VAC ± 10VAC	140VAC -150VAC ± 10VAC	
OUTPUT PARAMETERS					
Voltage Regulation		220V ± 20%	220V ± 20%	220V ± 10%	
Phase		1 Phase 3-Wire			
Frequency regulation		50Hz±0.1Hz			
Output Waveform		Pure Sine Wave			
Overload		>100% Load			
Short circuit Protection		>200% Load			
Full load (Bulb Load)		980W	2000W	4000W	
BATTERY PARAMETERS					
Type of Batteries		LiFePO4 Lithium Battery /Tubular battery/ SMF Battery			
Battery Charge Method		CC-CV			
USER INTERFACE					
Remote Monitoring		Wi-Fi/Bluetooth			
Solar Charge Controller Parameters					
SCC Type		MPPT			
SCC Rating		12V/40A	24V/40A	48V/40A	
SCC Voc		50VDC	50VDC	100VDC	

Technical Specification

Solar Hybrid PCU MPPT 10KVA (1P-1P)	
Technology	DSP Based Technology
Rating	10KVA
INPUT PARAMETERS	
Phases	1 Phase 3-Wire
I/P AC Voltage Range	160VAC-280VAC
OUTPUT PARAMETERS	
Voltage Regulation	220V \pm 10%
Phase	1 Phase 3-Wire
Frequency regulation	50Hz \pm 0.1Hz
Output Waveform	Pure Sine Wave
Load Power Factor	0.8 lag to unity
Total Harmonic Distortion (Resistive load)	5 %
Crest Factor	3:1
Full load	8KW
BATTERY PARAMETERS	
Type of Batteries	LiFePO4 Lithium Batteries
Battery KWH	9kWh
Battery Charge Method	CC-CV
USER INTERFACE	
Remote Monitoring	Wi-Fi/Bluetooth
OTHERS	
Indication	LCD panel
Solar Charge Controller Parameters	
SCC Type	MPPT
SCC Rating	5.5KW
SCC Voc	220VDC
SCC Isc	55A



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