

**LITHIUM-ION
BATTERY COMPATIBLE**



Key Features



**MPPT-Based Advanced
Technology PCU**



**Compatible with
Lithium-Ion Batteries**



**Smart Charging
Even During Low
Voltage 90V***



**Grid Charging Enable
/ Disable Option for
Reduced Electricity Bill**



Superb MPPT Solar PCU is an advanced solar hybrid inverter engineered for efficient and reliable power. Powered by MPPT technology and advanced DSP control, it maximizes solar energy utilization while ensuring uninterrupted power supply. Compatible with Lead Acid, Tubular, SMF, and Lithium-Ion (Li-Ion) batteries, it offers greater flexibility to suit a wide range of energy storage needs.

Designed with premium components and intelligent power management, Superb delivers enhanced energy efficiency and dependable performance across varying operating conditions. With an LCD display, 4 DOD levels, 10 ms changeover, independent battery charging, and an inbuilt UPS system, it provides greater flexibility and control.

Its robust design ensures consistent performance, efficient battery management, and reliable backup power. Engineered for long-term operation, Superb MPPT Solar PCU is an ideal solar power solution for residential and commercial applications across global markets.

TECHNICAL SPECIFICATIONS

MODEL NAME	1100VA / 12V	2500VA / 24V	3.2KVA / 24V
MAINS MODE			
Mains AC Input Voltage Range (UPS Mode)	185VAC to 255 VAC ± 10VAC		
Mains AC Low Cut / High Cut Voltage (UPS Mode)	175VAC / 265 VAC ± 10VAC		
Mains AC Low Cut / High Cut Recovery Voltage (UPS Mode)	185VAC / 255 VAC ± 10VAC		
Mains AC Input Voltage Range (WUPS Mode)	110VAC to 285 VAC ± 10VAC		
Mains AC Low Cut / High Cut Voltage (WUPS Mode)	90VAC / 295 VAC ± 10VAC		
Mains AC Low Cut / High Cut Recovery Voltage (WUPS Mode)	110VAC / 285 VAC ± 10VAC		
Input Frequency Range	40Hz to 60Hz		
BATTERY			
Battery Type	LA / Tubular / SMF / Li-Ion		
Battery deep Discharge Recovery	Yes (Independent Charger to recover Deep Discharge Battery)		
Adjustable Charging Current Setting (Front Panel)	5A-20A+ / -3A	5A-25A+ / -3A	
BACKUP MODE			
Output Voltage / Frequency	220VAC+ / -10% , 50Hz+ / -0.2Hz		
Output Waveform & THD	Pure Sine Wave ≤ 5% THD		
Low Battery Warning	10.8V+ / -0.2V Per Battery		
Low Battery Cut	10.4V+ / -0.2V Per Battery		
Change Over Time UPS Mode	<10ms		
Change Over Time WUPS Mode	<25ms		
Cooling	Temp. Controlled Fan		
PROTECTIONS			
Overload In Backup Mode	Yes provided , System will give Overload Indication at 101% Load.		
Short Circuit in Backup Mode	System will shutdown after 3 retries in case of Output Short Circuit.		
Short Circuit in Mains Mode	Mains MCB will trip		
Backfeed	System will shutdown & there will be no retry		
Phase To Phase Protection In Mains Mode	Yes, Provided by Electronic means		
Over Temperature	Yes provided, if heat sink temp. goes above 100 degree C. System will shut down.		
Reverse Battery	DC Fuse will blow		
SOLAR CHARGE CONTROLLER			
Solar Charge Controller Type	MPPT TYPE		
Max Panel Wattage Can Be Connected	1200W	2400W	3000W
Max PV Voltage	60V+ / -3V	103V+ / -3V	105V ± 2V
Max PV Current	55A ± 3A	50A ± 3A	70A ± 3A
Reverse PV Protection / Reverse Current Flow To PV	Yes provided, it will also display on LCD panel		
Sharing Of Current When PV & Grid Both Are Available	If PV power is not sufficient enough to charge the battery, system will start sharing battery charging from PV & grid.		
Mode Option	1. Solar > > Grid > > Battery (In this condition first priority is Solar then Grid and Battery) 2. Solar > > Battery > > Grid (In this condition first priority is solar then Battery and Grid) 3. Grid > > Solar > > Battery (In this condition first priority is Grid then Solar and Battery, Mains will not be disconnect in this condition)		
DOD Definition(Depth Of Discharge)	Mains will be connect when battery voltage reach at defined value of the battery voltage.*		
DOD (Depth Of Discharge)	20%- if Batt. Volt. is 12.5V ± 0.2V*	20%- if Batt. Volt. is 25V ± 0.2V*	
	30%- if Batt. Volt. is 12V ± 0.2V*	30%- if Batt. Volt. is 24V ± 0.2V*	
	40%- if Batt. Volt. is 11.5V ± 0.2V*	40%- if Batt. Volt. is 23V ± 0.2V*	
	50%- if Batt. voltage is 11V ± 0.2V*	50%- if Batt. Volt. is 22V ± 0.2V*	
Mains Disconnect SOC (State Of Charge)**	65%- of battery capacity*** Default SOC is 40%		
	75%- of battery capacity*** Default SOC is 30%		
	85%- of battery capacity*** Default SOC is 30%		
	95%- of battery capacity*** Default SOC is 30%		
Mains Disconnect SOC definition(State Of Charge)**	Mains will disconnect if battery will charge defined SOC level		
Mains Connect SOC (State Of Charge)**	30%- of battery capacity		
	40%- of battery capacity		
	50%- of battery capacity		
	60%- of battery capacity		
Mains Connect SOC definition(State Of Charge)**	Mains will be connect when battery use defined SOC value of full capacity		
Recommended Battery Capacity**	UP TO 260AH		
DISPLAYS & ALARMS			
LCD Status Display	Mains ON, I / P Voltage / Frequency, Battery Voltage / Charging / Charged, Charging Current, Backup Mode, UPS ON / OFF, Battery Voltage, Load %, Output Voltage / Frequency, Battery Current, PV Current / Voltage , Mains Low Cut / High Cut, Mains Not Available, Mains Frequency Cut Etc		
LCD Fault / Protection Status Display	Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed		
Buzzer	Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed		