



Key Features



**UP TO 1200W
PANEL SUPPORT**



**MPPT
TECHNOLOGY**



**24V PANEL
COMPATIBLE**



**Li-Ion / LA / SMF / TT
COMPATIBLE**



**WALL MOUNT
DESIGN**



Smarten MPPT Based Solar PCU is an advanced solar power solution designed to deliver efficient energy utilization, dependable backup and intelligent power management for homes and businesses. Its advanced MPPT technology maximizes available solar energy, ensuring higher efficiency and improved overall system performance.

The smart charging system intelligently manages power from both solar and grid sources to provide reliable and uninterrupted performance. Designed for diverse global power conditions, it features pure sine wave output, flexible solar priority settings and compatibility with Lithium-Ion batteries for enhanced flexibility.

The system also offers comprehensive protection, a compact wall-mountable design, fast changeover and an intuitive graphical LCD interface. Together, these features provide seamless, convenient and efficient power management, making it an ideal choice for everyday residential and commercial energy needs.

PRODUCT SPECIFICATIONS

MODEL NAME	1100 / 12V	1250 / 12V
MAINS MODE		
Mains AC Input Range (UPS Mode)	185VAC to 255VAC ± 10VAC	
Mains AC Low Cut / High Cut (UPS Mode)	175VAC / 265VAC ± 10VAC	
Mains AC Low Cut / High Cut Recovery (UPS mode)	185VAC / 255VAC ± 10VAC	
Mains AC Input Range (WUPS Mode)	110VAC to 285VAC ± 10VAC	
Mains AC Low Cut / High Cut (WUPS Mode)	90VAC / 295VAC ± 10VAC	
Mains AC Low Cut / High Cut Recovery (WUPS mode)	110VAC / 285VAC ± 10VAC	
Input frequency range	40Hz to 60Hz	
BATTERY		
Battery type	LA / TUB / Li-Ion / SMF	
Battery deep Discharge Recovery	Yes (Independent Charger to recover Deep Discharge Battery)	
Adjustable Charging Current Setting (Front Panel)	5A-20A+ / -3A *(20A Fixed for Li-ion Battery)	
BACKUP MODE		
Output Voltage / Frequency	220VAC+ / -10% , 50Hz+ / -0.2Hz	
Output Waveform	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	AC Fuse will blow	
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 be blown	
SOLAR CHARGE CONTROLLER		
Solar Charge Controller type	MPPT TYPE	
Max Panel wattage can be connected	600W	1200W
Max PV Voltage	60V+ / -3V	
Max PV current	25A ± 3A	50A ± 3A
Reverse PV protection / Reverse currentflow to PV	Yes provided, it will also display on LCD panel	
Sharing of current when PV and 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)	
Mains Disconnect SOC (State of charge)**	65%- of Battery capacity*	
	75%- of Battery capacity*	
	85%- of Battery capacity*	
	95%- of Battery capacity*	
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	
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 %, O / P 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, Short Circuit, Overload, Battery Low, High Temperature, Back feed	
Buzzer	Audible beep for Overload , Short Circuit, Back feed, Low Battery, Over Temperature, Mains Fuse blown	