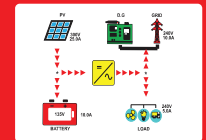


# SUN PRO

## SOLAR HYBRID PCU

**MPPT**  
**3.5KVA/3KW - 10KVA/10KW**

**Unique Display**



## 3.5KVA - 3KW/24V

### Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 70 Amp
- Lcd Display ( 16 X 2)
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available



## 5KVA - 5KW/48V

### Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 100 Amp
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available



## 10KVA - 10KW/96V

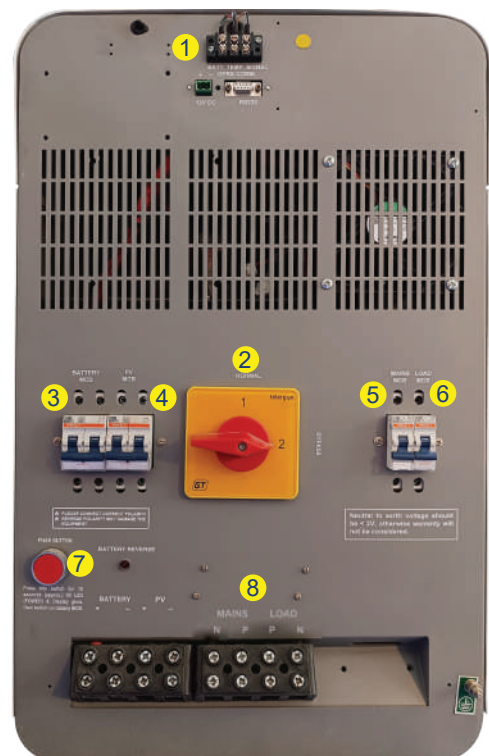
### Features

- DSP Pure Sine wave Solar PCU MPPT Technology Using Heavy Duty Mosfet.
- Intelligent Sharing – Solar Priority To Save More Electricity.
- Solar Preference Charging For Battery To Reduce The Power Used From Grid.
- Built In Solar Charge Controller – 80 Amp
- Built In Galvanic Isolation Transformer
- MNRE Approved
- Active Front End Charger
- Low Input Current Distortion
- Efficiency – 90%
- Can Be Upgraded To Grid Export Hybrid PCU at Any Time.
- MCB – AC , DC , Solar Used
- Manual Bypass – Rotary Type
- Remote Monitoring Device Available



## Rear View

1. Batt. Temp. Signal
2. Manual Bypass Switch
3. Battery MCB
4. PV MCB
5. Mains MCB
6. Load MCB
7. Push Button
8. Mains Load



# TECHNICAL SPECIFICATION

INVERTER RATING (KVA)	3.5KVA	5KVA	10KVA
<b>A. SOLAR CHARGE CONTROLLER (SCC)</b>			
1 Charger Type & Topology	Buck Type MPPT		
2 PV Total Nominal Capacity (KVA)	3KW	5KW	10KW
3 No. of MPPT Channels	1	1	1
4 Per Channel PV Capacity (w) (Nominal Peak)	3.5KW/3.2KW	5KW/5.5KW	10KW/11KW
5 Max. Open Circuit PV Volts (Voc)	240	240	400
6 MPPT Voltage Range (Volts)	70-240	96-300	140-400
7 PV Minimum Voltage (Volts)	24	48	120
8 Max. I/P Amps Per Channel (Amps)	45	75	60
9 Max. Battery Amps during PV Charging (Amps)	70	100	80
10 Battery type supported	VRLA / LMLA/ Li-Ion/Li-Ph (User Settable)		
11 Min. Battery AH (Suggested)	150	150	150
12 Peak Charging Efficiency(%)			
<b>B. Solar Inverter</b>			
1 No. of Phase/Connection Type	1-Phased /2 wire		
2 Nominal battery voltage (Volts)	24	48	96
3 Battery Ripple	5% for VRLA & LMLA/ 1% for Li-Ion/Li-Ph (User Settable)		
4 Nominal Output Voltage/Frequency (Volts/Hz)	230/50		
5 Nominal KVA Capacity (KVA)	3.5KVA	5KVA	10KVA
6 Output Amps	10.43	17.39	34.78
7 Voltage Regulations( In Standalone Mode)	±2%		
8 Freq. Regulation (in Standalone Mode)	±0.5Hz		
9 THD	<3%		
10 Load Power Factor	0.8 Lag to Unity		
11 Efficiency(%) Peak/100% Load /25% Load	>89/>88/>86	>90/>87/>86	>89/>89/>86
12	100-110% - 60 Sec		
13 Over Loads:	110-125% - 30 Sec		
14	125-150% - 5 Sec		
15 Max Allowed Phase Imbalance(%)	N/A		
16 Auto Bypass Feature	Provided		
<b>C. GRID CHARGER</b>			
1 Grid Voltage Range (Voltage Sync. Range )	160V-280V (Phase to Neutral)		
2 Grid Frequency Range (Voltage Sync. Range)	50Hz ±5%		
3 Max Grid Import Power (KVA)	3.5KVA	5KVA	10KVA
4 Max Battery Amps During Grid Charging (Amps)	40	68	54
5 Peak Charging Efficiency (%)	>87		
INVERTER (KW)	3	4	8
1 PV Side	Reverse Polarity, Surg Protection		
2 Battery Side	Reverse Polarity, Over/Under Voltage, Current Limit		
3 Grid Side	Over/Under Voltage, Over/Under Frequency, Anti-Islanding, Surg Protection		
4 Load Side	Overloads, Short Circuit		
5 System Protection	Over Temperature Trip, Breakers at all Inputs, Emergency stop		
<b>D. USER INTERFACE</b>			
1. DISPLAY INTERFACE	LCD NUMERICAL DISPLAY		
2. DISPLAYED PARAMETERS	Voltage, Charging Current, Discharging Current, AH-in AH-out, Cumulative AH-in, Cumulative AH-out, Charging State-Charging/Discharging		
1 Battery Parameters	Voltage, Current, Power, Cumulative, Today Generation		
2 PV Parameters	Voltage, Current, Frequency, Import Power, Import Cumulative, Today Generation		
3 Grid Parameters	Voltage, Current, Frequency, Power, Cumulative, Power Factor		
4 Load Parameters	90 Days PV Geration, Import Energy, Load Energy.		
5 Data Logging	Faults and Warnings		
6 System Level			
3 INDICATION/PROTECTION			
LED Indication:	Power On, PV Available, PV Charging Inverter On, Grid Import Mode , Fault, HYBRID/OFF GRID Mode		
User Keypad for Settings Changes	Keypad for Settings Input		
Breakers at all Inputs/Space Heater/Emergency stop Button	Provided		
Over Shoot due to misbehaviour of BHMS	Provided		
Remote Monitoring: Optional*	Data Monitoring through (GPRS Optional)		
Designed & Manufactured the Product as for IEC	Tested as per IEC 61683, IEC61727, EN50530 and IEC60068 (1,2,14,30).		
<b>MISCELLANEOUS</b>			
Degree of Protection	IP31		
Cooling Method	Temp. Controlled Force Cooling		
Operating Temperature	0-55C ambient Operation		
Humidity (Non-condensign)	Max. 95% Non-Condensing		
Altitude (above Sea level)	1000m above sea level		
Housing	Sheet Metal ,Floor Standing	Floor Standing,Front/Rear Door	
Color Shade	RAL-7035/RAL-7016		
Cable Entry	Rear Bottom	Front Bottom	
Cable Termination Type	Bus Bar Type with ring type lugs		
Terminal Sizes (PV/Battery/Grid/Load)	TERMINAL SCREW TYPE	35-50MM/35-50MM/25MM/25MM	