

# SUN PRO SOLAR HYBRID PCU

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











### 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-120V

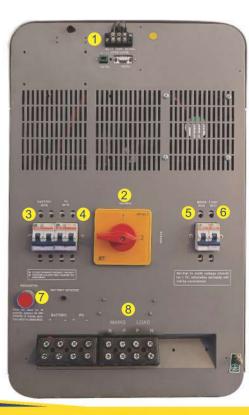
#### **Features**

- ▶ 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	
20   September 10						12000	
10   No of Information Countries (NOS)			Ruck Type MPPT				
A. B. C. CAMER PER CENSORY (FORMAR) MINES         2.3 MEVA 2-MINES         1.2 MEVA 2-MINES         2.4 MEVA 2-MINES         2.4 MEVA 2-MINES         4.00           M. MEY TOURS PROVIDED (MINES)         7.24 MEVA 2-MINES         4.00         4.00         3.00         4.00         4.00         3.00         4.00         4.00         3.00	2		3KW			10KW	
Memory Content Provides froot   240   240   440   450   440   320	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	
Membrane Respondency (which   1936   1948   1930   193	5	Max. Open Circuit PV Volts (Voc)	240	240			
Mode	6	MPPT Voltage Range (Volts)	70-240	96-30	20		
Mode   March Annice No. Colorent Ground   40   7-   90   90	-						
10   Silver, Ample of large   Pickerging Jenges    192	-						
190   Both Value appears	9			100	ı		
1.5   1.5	10	Battery type supported	VF	RLA / LMLA / Li-lon/L	i-Ph (User Settable		
	11		150	, ,			
20   Nemico Servingo (Votal)   24   88   96 tot	B. Sc						
Set Starty Mapping				1-Phased	/2 wire		
A	2	Nominal battery voltage (Volts)	24	48		96-120	
S   Control Art Capacity (XPA)   3.40	3	Battery Ripple	5% for \	I L 5% for VRLA & LMLA/1% for Li-Lon/Li-Ph (User Settable)			
20   September	4	Nominal Output Voltage/Frequency (Votls/Hz)					
7	5	Nominal KVA Capacity ( KVA)	3.5KVA	5KV/	Α	10KVA	
Prog. Regulation (in Standalore Mode)	6	Output Amps	10.43	17.3	9	34.78	
1	-						
10   10   10   10   10   10   10   10	8						
13	9						
Billingsy(8), Peak 1005 Leas (20% Load   110-125% - 30 lec   11	10						
13   Max Allowed Phase Imbalance(N)   Park Allowed Phase Imbalance(N)   Provided	11	Effiancy(%) Peak/ 100% Load /25% Load					
1	12	Over Loads:	110-125% - 30 Sec				
C   C   C   C   C   C   C   C   C   C	13	Max Allowed Phase Imbalance(%)	N/A				
1   1   1   1   1   1   1   1   1   1	14	Auto Bypass Feature	Provided				
1   1   1   1   1   1   1   1   1   1	C. G						
Max Grid Import Power (KVA)   3.5KVA			160V-280V (Phase to Nutral)				
40 Max Battery Amps During Grid Charging (Amps) 40 68 59 Near Charging Efficiency (%) 40 1	2	Grid Frequancy Range (Voltage Sync. Range)		50Hz ±5%			
1	3	Max Grid Import Power (KVA)	3.5KVA	5K\	/A	10KVA	
1	4	Max Battery Amps During Grid Charging (Amps)	40	68	В	54	
Battery Side Reverse Polarity, Surg Protection Battery Side Reverse Polarity, Over/Under Voltage, Current Limit Battery Side Over/Under Voltage, Over/Under Voltage, Current Limit Voltage, Over/Inder Voltage, Over/Under Proquency, Artislanding, Surg Protection Vover/Under Voltage, Over/Inder Voltage, Over/	5						
Battery Side Reverse Polarity, Over/Under Voltage, Current Limit  Grid Side Over/Under Voltage, Over/Under Voltage, Over/Under Voltage, Over/Under Frequency, Anti-Islanding, Surg Protection  Over Temperature Trip, Breakers at all Inputs, Emergency stop  DUSER INTERFACE  DISPLAY INTERFACE  DISPLAY INTERFACE  DISPLAY STREAMETERS  VRI.A   LMLA   L-Inn/L-Ph (User Suitable)  Battery Parameters  Voltage, Charging Current, Discharging Current, Air Al-out, Currialate Air-out, Currialate Ai	INVI	ERTER (KW)	3	4	4	8	
Reverse Polarity, Over/Under Voltage, Current Limit  Grid Side OverlUnder Voltage, OverlUnder Frequency, Anti-Islanding, Surg Protection  Overloads, Short Circuit  System Protection Over Temperature Trip, Breakers at all Inputs, Emergency stop  DUSER INTERRACE  LOD NUMERICAL DISPLAY  DISPLAY INTERRACE  LOD NUMERICAL DISPLAY  DISPLAY ED PARAMETERS VOLTA, LAMALA L.Hon/L.H.Ph (User Suitable)  Battery Parameters Voltage, Current, Derbarging Current, Ashira Al-out, Cumulative, Arlan, Cumulative, Arlan, Cumulative, Arlan, Cumulative, Arlan, Cumulative, Arlan, Cumulative, Today Generation  Voltage, Current, Prequency, Import Power, Import Dewer,	1	PV Side					
Load Side	2	Battery Side					
4 Load Side OverTemperature Trip, Breakers at all Inputs/Space Heater(Emergency stop Dutton  1 DISPLAY INTERFACE 1 DISPLAYED PARAMETERS 2 DISPLAYED PARAMETERS 3 Voltage, Charging Current, 14-his Lot, Lot, Lot, Lot, Lot, Lot, Lot, Lot,	3	Grid Side					
DISPLAY INTERFACE   LCD NUMERICAL DISPLAY	4	Load Side					
DISPLAY INTERFACE   CD NUMERICAL DISPLAY	5	System Protection	·				
DISPLAYED PARAMETERS   VRLA / LMLA/ Li-Ion/Li-Ph (User Suitable)	D. U	SER INTERFACE					
Battery Parameters	1	DISPLAY INTERFACE	LCD NUMERICAL DISPLAY				
2     PV Parameters     Voltage, Current, Power, Current, Frequency, Import Currulative, Today Generation       3     Grid Parameters     Voltage, Current, Frequency, Import Currulative, Today Generation       4     Load Parameters     Voltage, Current, Frequency, Power, Currulative, Power Factor       5     Data Logging     90 Days PV Generation, Import Energy, Load Energy.       6     System Level     Faults and Warnings       3     INDICATION/ PROTECTION     Power On, PV Available, PV Charging Inverter On, Grid Import Mode , Fault, HYBRID/OFF GRID Mode       2     User Keypad for Settlings Changes     Keypad Settlings Input       3     Breakers at all Imputs/Space Heater/Emergency stop Button     Provided       4     Over Shoot due to misbehaviour of BHMS     Provided       5     Remote Monitoring: Optional*     Data Monitoring through (GPRS Optional)       4     DESIGNED & MANUFACTURED THE PRODUCT AS FOR IEC     Tested as per IEC 61683, IEC61727, ENSS30 and IEC60068 (1, 2, 14, 30).       1     MISCELLANEOUS     IP31       3     Cooling Method     Temp. Controll       4     Operating Temperature     0-55C ambit Operation       5     Humidity (Non-condensign)     Max. 95% not-condensing       6     Altitude (above Sea level)     Sheet Metal, Floor Standing     Floor Standing, Front/Rear Door       8     Color Shade     RAL-7035/RAL-7016<	2	DISPLAYED PARAMETERS					
2     PV Parameters     Voltage, Current, Power, Current, Frequency, Import Currulative, Today Generation       3     Grid Parameters     Voltage, Current, Frequency, Import Currulative, Today Generation       4     Load Parameters     Voltage, Current, Frequency, Power, Currulative, Power Factor       5     Data Logging     90 Days PV Generation, Import Energy, Load Energy.       6     System Level     Faults and Warnings       3     INDICATION/ PROTECTION     Power On, PV Available, PV Charging Inverter On, Grid Import Mode , Fault, HYBRID/OFF GRID Mode       2     User Keypad for Settlings Changes     Keypad Settlings Input       3     Breakers at all Imputs/Space Heater/Emergency stop Button     Provided       4     Over Shoot due to misbehaviour of BHMS     Provided       5     Remote Monitoring: Optional*     Data Monitoring through (GPRS Optional)       4     DESIGNED & MANUFACTURED THE PRODUCT AS FOR IEC     Tested as per IEC 61683, IEC61727, ENSS30 and IEC60068 (1, 2, 14, 30).       1     MISCELLANEOUS     IP31       3     Cooling Method     Temp. Controll       4     Operating Temperature     0-55C ambit Operation       5     Humidity (Non-condensign)     Max. 95% not-condensing       6     Altitude (above Sea level)     Sheet Metal, Floor Standing     Floor Standing, Front/Rear Door       8     Color Shade     RAL-7035/RAL-7016<	1	Battery Parameters	Voltage, Charging Current, Discharging Current, AH-in AH-out, Cumulative AH-in, Cumulative AH-out, Charging State-Charging/Discharging				
3   Grid Parameters   Voltage, Current, Frequency, Import Cumulative, Today Generation   4   Load Parameters   Voltage, Current, Frequency, Power, Cumulative, Power Factor   5   Data Logging   90 Days PV Generation, Import Energy, Load Energy,   6   System Level   Faults and Warnings   3   INDICATION/ PROTECTION   1   LED Indication: Power On, PV Available, PV Charging Inverter On, Grid Import Mode , Fault, HYBRID/OFF GRID Mode   2   User Keypad for Settings Changes   Keypad for Settings Input   3   Breakers at all Inputs/Space Heater/Emergency stop Button   Provided   4   Over Shoot due to misbehaviour of BHMS   Provided   5   Remote Monitoring: Optional*   Data Monitoring through (GPRS Optional)   4   DESIGNBE & MANUFACTURED THE PRODUCT AS FOR IEC   Tested as per IEC 61683, IEC61727, EN50530 and IEC60068 (1,2,14,30).   5   Degree of Protection   IP31   5   Cooling Method   Temp. Controlled Force Cooling   4   Operating Temperature   O-55C ambient Operation   5   Humidity (Non-condensign)   Max. 95% Non-Condensing   6   Altitude (above Sea level)   1000m above sea level   7   Housing   Sheet Metal , Floor Standing   Floor Standing, Front/Rear Door   8   Color Shade   RAL-7035/RAL-7016   9   Cable Entry   Rear Bottom   Front Bottom   10   Cable Termination Type   Bus Bar Type with ring type lugs	2	PV Parameters					
5 Data Logging 90 Days PV Generation, Import Energy, Load Energy.  6 System Level Faults and Wamings  3 INDICATION/ PROTECTION  1 LED Indication: Power On, PV Available, PV Charging Inverter On, Grid Import Mode , Fault, HYBRID/OFF GRID Mode  2 User Keypad for Settlings Changes Keypad for Settlings Input  3 Breakers at all Inputs/Space Heater/Emergency stop Button Provided  4 Over Shoot due to misbehaviour of BHMS Provided  5 Remote Monitoring: Optional* Data Monitoring through (GPRS Optional)  4 DESIGNED & MANUFACTURED THE PRODUCT AS FOR IEC Tested as per IEC 61683,IEC61727,ENS0530 and IEC60068 (1,2,14,30).  1 MISCELLANEOUS  2 Degree of Protection IP31  3 Cooling Method Temp. Controlled Force Cooling  4 Operating Temperature O-55C ambient Operation  5 Humidity (Non-condensign) Max. 95% Non-Condensing  6 Altitude (above Sea level) 1000m above sea level  7 Housing Sheet Metal , Floor Standing Floor Standing, Front/Rear Door  8 Color Shade RAL-7035/RAL-7016  9 Cable Entry Rear Bottom Front Bottom  10 Cable Termination Type	3	Grid Parameters	Voltage, Current, Fre				
System Level   Faults and Warnings	4	Load Parameters	Voltage, Cu	Voltage, Current, Frequency, Power, Cumulative, Power Factor			
INDICATION/ PROTECTION   Power On, PV Available, PV Charging Inverter On, Grid Import Mode , Fault, HYBRID/OFF GRID Mode	5	Data Logging	90 Da	ys PV Generation, Im	port Energy, Load	Energy.	
1       LED Indication:       Power On, PV Available, PV Charging Inverter On, Grid Import Mode , Fault, HYBRID/OFF GRID Mode         2       User Keypad for Settings Changes       Keypad for Settings Input         3       Breakers at all Inputs/Space Heater/Emergency stop Button       Provided         4       Over Shoot due to misbehaviour of BHMS       Provided         5       Remote Monitoring: Optional*       Data Monitoring through (GPRS Optional)         4       DESIGNED & MANUFACTURED THE PRODUCT AS FOR IEC       Tested as per IEC 61683,IEC61727,EN50530 and IEC60068 (1,2,14,30).         1       MISCELLANEOUS       IP31         2       Degree of Protection       IP31         3       Cooling Method       Temp. Controlled Force Cooling         4       Operating Temperature       0-55C ambient Operation         5       Humidity (Non-condensign)       Max. 95% Non-Condensing         6       Altitude (above Sea level)       1000m above sea level         7       Housing       Sheet Metal ,Floor Standing       Floor Standing,Front/Rear Door         8       Color Shade       RAL-7035/RAL-7016       Front Bottom         9       Cable Entry       Bus Bar Type with ring type lugs	6	System Level		Faults and Wamings			
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Breakers at all Inputs/Space Heater/Emergency stop Button  Provided  Over Shoot due to misbehaviour of BHMS  Remote Monitoring: Optional*  Data Monitoring through (GPRS Optional)  Tested as per IEC 61683,IEC61727,EN50530 and IEC60068 (1,2,14,30).  IMISCELLANEOUS  Degree of Protection  Cooling Method  Operating Temperature  Operating Temperature  Humidity (Non-condensign)  Altitude (above Sea level)  Housing  Color Shade  Color Shade  Cable Entry  Cable Termination Type  Bus Bar Type with ring type lugs	1	LED Indication:	Power On, PV Available, PV Charging Inverter On, Grid Import Mode , Fault, HYBRID/OFF GRID Mode				
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Data Monitoring: Optional*   Data Monitoring through (GPRS Optional)	3	Breakers at all Inputs/Space Heater/Emergency stop Button					
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1         MISCELLANEOUS           2         Degree of Protection         IP31           3         Cooling Method         Temp. Controlled Force Cooling           4         Operating Temperature         0-55C ambiant Operation           5         Humidity (Non-condensign)         Max. 95% Non-Condensing           6         Altitude (above Sea level)         1000m above sea level           7         Housing         Sheet Metal ,Floor Standing         Floor Standing,Front/Rear Door           8         Color Shade         RAL-7035/RAL-7016           9         Cable Entry         Rear Bottom         Front Bottom           10         Cable Termination Type         Bus Bar Type with ring type lugs	5	Remote Monitoring: Optional*					
2         Degree of Protection         IP31           3         Cooling Method         Temp. Controlled Force Cooling           4         Operating Temperature         0-55C ambient Operation           5         Humidity (Non-condensign)         Max. 95% Non-Condensing           6         Altitude (above Sea level)         1000m above sea level           7         Housing         Sheet Metal ,Floor Standing         Floor Standing, Front/Rear Door           8         Color Shade         RAL-7035/RAL-7016           9         Cable Entry         Rear Bottom         Front Bottom           10         Cable Termination Type         Bus Bar Type with ring type lugs	4	DESIGNED & MANUFACTURED THE PRODUCT AS FOR IEC	Tested as per IEC 61683,IEC61727,EN50530 and IEC60068 (1,2,14,30).				
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4 Operating Temperature 0-55C ambient Operation 5 Humidity (Non-condensign) Max. 95% Non-Condensing 6 Altitude (above Sea level) 1000m above sea level 7 Housing Sheet Metal ,Floor Standing Floor Standing,Front/Rear Door 8 Color Shade RAL-7035/RAL-7016 9 Cable Entry Rear Bottom Front Bottom 10 Cable Termination Type Bus Bar Type with ring type lugs		Degree of Protection					
Separating temperature   Separating temperat	$\overline{}$	Cooling Method	Temp. Controlled Force Cooling				
6         Altitude (above Sea level)         1000m above sea level           7         Housing         Sheet Metal ,Floor Standing         Floor Standing,Front/Rear Door           8         Color Shade         RAL-7035/RAL-7016           9         Cable Entry         Rear Bottom         Front Bottom           10         Cable Termination Type         Bus Bar Type with ring type lugs		Operating Temperature		·			
7 Housing Sheet Metal ,Floor Standing Floor Standing,Front/Rear Door 8 Color Shade RAL-7035/RAL-7016 9 Cable Entry Rear Bottom Front Bottom 10 Cable Termination Type Bus Bar Type with ring type lugs	5	Humidity (Non-condensign)					
8         Color Shade         RAL-7035/RAL-7016           9         Cable Entry         Rear Bottom         Front Bottom           10         Cable Termination Type         Bus Bar Type with ring type lugs	6	Altitude (above Sea level)		1000m abov	ve sea level		
9 Cable Entry Rear Bottom Front Bottom 10 Cable Termination Type Bus Bar Type with ring type lugs	7	Housing	Sheet Metal ,Floor	Standing	Fle	oor Standing,Front/Rear Door	
10 Cable Termination Type Bus Bar Type with ring type lugs	8	Color Shade		RAL-7035,	/RAL-7016		
	9	Cable Entry		Rear Bottom		Front Bottom	
11 Terminal Sizes (PV/Battery/Grid/Load) TERMINAL SCREW TYPE 35-50MM/35-50MM/25MM/25MM	10	Cable Termination Type		Bus Bar Type wi	th ring type lugs		
	11	Terminal Sizes (PV/Battery/Grid/Load)	TERMINAL SCRI	W TYPE	35-5	0MM/35-50MM/25MM/25MM	