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SOLAR PCU Beta N Series

This product is specially for Nepal...

PCU is a Solar Power Conditioning Unit (PCU) which uses Solar energy (primary) and also the power from grid (secondary), to charge the batteries. Since usage of power from grid is secondary, grid power is only used when solar energy is not present and battery voltage level reduces to a certain level. Grid power is also needed when solar power is reduced to a certain level and battery voltage is reduced to a certain level.



Beta N PCU has the following features:

1. DSP base design built in MPPT solar charge controller.
2. Most advanced LCD features with AC & DC energy meters.(optional)
3. USB/Ethernet based monitoring with 30 days data storage. (optional)
4. Maximum preference to solar. Smart PCU.
5. No load shut down.(optional) By default factory setting-Disable
6. Capability of 100% panel rating.
7. Unity power factor on requirement.
8. Compatible with all PV arrays having different no. of cells.(36 cell/60 cell/72 cell)
9. Tested as per IEC/MNRE parameters. 1-5 KVA MNRE Approved.
10. Single card design more reliable as less wiring is done and has less weight.
11. Lightening protection.
12. All fault display on front panel.
13. High efficiency MPPT and Inverter.
14. 1-5 KVA MNRE Approved.
15. No Load Shutdown – Enable / Disable
16. Grid Charger – Enable / Disable

KEY FEATURES

- * Battery Health For Longer Life
- * Extensive electronic protections
- * Utilizes maximum power available from the panel
- * Computer interface (Optional)
- * LCD display with Energy Meter and Data Logging (optional)

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SPECIFICATION

Rating		1.5KVA	2.5 KVA	3.5KVA	5KVA
Nominal Battery voltage	v	24	48	48	96
VOC	VDC	45	90	90	180
Input Voltage range(Min-Max)	VOC	36-90	72-180	72-180	144-360
Maximum PV power recommended	KW	1.5 KW	2.5 KW	3.5 KW	5 KW
Controller Maximum Ampere	Amp.	65	60	80	60
Number of Charge Controller		1			
MPPT based charge controller					
Switching element		IGBT	IGBT	IGBT	IGBT
Controller		DSP	DSP	DSP	DSP
Type of charger		PWM with MPPT	PWM with MPPT	PWM with MPPT	PWM with MPPT
Efficiency		90	90	90	90
Configurable Parameter					Default value
Battery Low Buzzer	V	10.4-11.85			11.2
Battery Low Cut	V	10-11.7			11.0
Batter High Cut	V	15-16			15.5
Battery Charging Voltage by SPV	V	13.5-15			14.5
Battery Charging Current by SPV	V	12-25			18
Battery Charging Voltage by Grid	A	13.0-14.5			13.5
Battery Charging Current by Grid	V	3-12			10
Grid Low Cut Voltage	V	155-200			175
Grid High Cut Voltage	V	245-280			275
Output Voltage Low	V	170-190			185
Output Voltage High	V	250-260			260
Output Voltage	VAC	220±5%220±5%	220±5%	220±5%	220±5%
Inverter efficiency at rated resistive Load	%	90-92	90-92	90-92	90-92
Over Load	%	100-125 60Sec. 120-150 30Sec.152-200 2Sec.	100-125 60Sec. 120-150 30Sec.152-200 2Sec.	100-125 60Sec. 120-150 30Sec.152-200 2Sec.	100-125 60Sec. 120-150 30Sec.152-200 2Sec.
Output					
Frequency	Hz	50	50	50	50
THD	%	<3	<3	<3	<3
Nominal Power	W	1200	2000	2800	4000
Maximum Input Current	A(DC)	62	55	70	55
Maximum Load Current	A(AC)	5.2	9	12.7	18
Power Factor		0.8	0.8	0.8	0.8
No Load Current	%	2(at rating)	2(at rating)	2(at rating)	2(at rating)
Power Saving/ Sleep Mode	Yes	Yes	Yes	Yes	Yes
Built -in Indication		System On, Inverter On, S P Charging, Battery Low/ High, Mains Low/High, Overload	System On, Inverter On, S P Charging, Battery Low/ High, Mains Low/High, Overload	System On, Inverter On, S P Charging, Battery Low/ High, Mains Low/ High, Overload	System On, Inverter On, S P Charging, Battery Low/ High, Mains Low/High, Overload
Battery Deep Discharge	Load Disconnect (LVD) at:	21.4V ± .2V	42.8V ± .2V	42.8V ± .2V	85.6V ± .2V
Protection		Short ckt on o/p terminals, Reverse polarity on DC i/p terminals, overload, over temp, panel reverse	Short ckt on o/p terminals, Reverse polarity on DC i/p terminals, overload, over temp, panel reverse	Short ckt on o/p terminals, Reverse polarity on DC i/p terminals, overload, over temp, panel reverse	Short ckt on o/p terminals, Reverse polarity on DC i/p terminals, overload, over temp, panel reverse
Operating Temperature	*C	0 to 55	0 to 55	0 to 55	0 to 55
Ac Charging		Yes	Yes	Yes	Yes
Temperature Compensation		No	No	No	No
Application		Indoor Only	Indoor Only	Indoor Only	Indoor Only
Audible Noise Produced by Inverter	db	<60	<60	<60	<60
Warranty Years		2	2	2	2
International standards Fulfilled		IP21	IP21	IP21	IP21