



# India's Most Intelligent Solar PCU

# 4EVER

## DSP SOLAR HYBRID PCU



Available Models :  
2500/24V, 4000/48V,  
5500/96V & 8000-10000/120V



# SOLAR POWER CONDITIONING UNIT (PCU)

is an integrated system consisting of a solar charge controller, inverter and a Grid charger. It provides the facility to charge the battery bank through either a Solar or Grid / DG set. The PCU continuously monitors the state of battery voltage, solar power output and the load. Due to constant usage of power, if the battery voltage goes below a set level, the PCU will automatically transfer the load to the Grid / DG power and also charge simultaneously. The PCU always gives preference to the solar power and will use Grid / DG power only when the solar power / battery charger is unable to meet the load requirement.



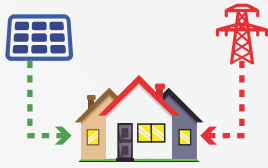
## How is a Solar Power Conditioning Unit Different from a Regular Inverter?

A solar power conditioning unit basically contains parts like a solar charger, battery mechanism, output selector mechanism, control algorithm, grids (main utility) charger as well as an inverter. It functions as an integrated system which gives the user the facility of charging the battery through either solar power or a grid / DG set. Getting a power inverter for home would be enough to meet all the requirements of energy.

Each unit of the PCU functions to improve efficiency and performance. The solar charger, using either PWM or MPPT technology, is the device that converts the received solar energy and charges the battery. The inverter plays the role of converting the stored DC voltage in the battery to AC power to the required output voltage. The grid charger is used when solar energy isn't available and with its help, energy from the grid can be used for charging the battery. The selector mechanism is the relay that makes it possible to prioritize solar energy and make sure grid energy is used if the solar energy is exhausted. The control algorithm also sets the PCU apart from a normal inverter by prioritizing and selecting the source of charging the battery. The battery bank stores the solar charger for another usage.

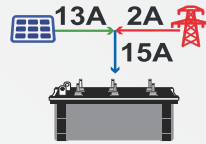


# 4EVER Solar PCU Smart Features



## SOLAR PRIORITY

Solar Power is of first priority while charging. This means when solar power is available, only batteries will be charged irrespective of grid



## INTELLIGENT CHARGING SHARING

Uses maximum solar power to charge the batteries along with required grid, if needed. Concludes the reduction in electricity bill



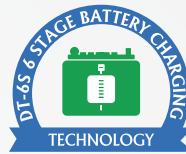
## DSP BASED TECHNOLOGY

Works on intelligent UPS management system. Provides dynamic output voltage regulation, optimize system efficiency and communication with other equipments



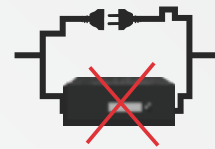
## COMPATIBLE WITH GENERATORS

Wide window of frequency range between 42-65Hz makes 4Ever totally compatible with local generators



## DT - 6S STAGE BATTERY CHARGING TECHNOLOGY

6 Stage Battery Charging Technology gives you highest battery charging efficiency in the industry which increases battery life by 30%



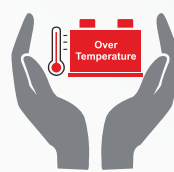
## BYPASS SWITCH

This switch helps to bypass the electricity to mains whenever there is a failure in the inverter. This makes the system user-friendly and convenient



## REVERSE CURRENT PROTECTION

Protect your system against the bad reverse current



## OVER TEMPERATURE PROTECTION

Ensures healthy charging & longer battery life that provides current and voltage as per the requirement of battery and surrounding temperature

ZERVO WELCOMES YOU

## LCD DISPLAY

LCD both display icons are provided for better indications and alerts



**TECHNICAL SPECIFICATION**

Parameter	Unit					
		2500/24V	4000/48V	5500/96V	8000/120V	10000/120V
<b>Model 4EVER</b>						
System rating (Name Plate)	VA	2000	3500	5000	7500	10000
Resistive Load	W	1600	2800	4000	6000	8000
Operating DC voltage	V	24	48	96	120	
Input voltage max Voc	Vdc	62	90	180	235	
Maximum Solar array power	Wp	1000	3500	5000	7500	7500
Max PV modules of 250/260Wp	Nos	4	14	20	30	30
Modules in series	Nos	No	2	4	5	5
Parallel strings	Nos	4	7	5	6	6
Type of solar charger		PWM				
Max current rating of SCC	Adc	30	50.0			
Efficiency of SCC	%	>90				
Nominal Output voltage in inverter mode	Vac	220V ± 7V			230±7V	
Output supply phases		Single				
Nominal Frequency (in inverter mode)	Hz	50 ± 1				
Frequency (Min - Max during Grid by pass) UPS mode	Hz	47-53				
Output voltage regulation	V	195-220			195-230	
Output THD (v) at linear load	%	<5%				
Crest Factor		03:01				
Overload capacity 125%	Sec	6 (6 Retry)				
Overload capacity 150%	Sec	2 (6 Retry)				
Cooling Fan ON at temp	°C	60(or >45%load and Solar >15A)			Continuous Run	
Cooling Fan Off at temp	°C	55 (or <40%load and Solar <10A)			Continuous Run	
Battery low voltage alarm per battery	Vdc	10.8 ± 0.1V				
Battery low voltage cut per battery	Vdc	10.5 ± 0.1V (4 Retry)				
Batter low cut recovery per battery through Solar	Vdc	12.7 ± 0.1V (Or mains and Front Switch)				
Battery High cut with Alarm per battery	Vdc	14.8±0.1V				
Battery High cut Recovery per battery	Vdc	14.3±0.1V				
Max Battery charging current by Solar	Adc	20±2A				
Max Charging current to battery by Solar+Grid	Adc	20±2A				
Grid charging Enable/Disable		Yes				
Selection of UPS Load/Normal Load		Thru switch				
Output Voltage at No load at Nominal Battery voltage	Vac	220			230	
Noise @ 1 meter	dB	<50				
Protections		Batt. Low, Batt. High, Overload, Short circuit, Over temp, PV reverse, MCB Trip / Fuse Trip				
LCD Display parameters		PV Current, Batt. voltage, Mains voltage, PCU On-Off, UPS Mode On-Off, Solar On-Off, Load percentage (0 to 150%), Load status (on solar, battery or grid), Charging status, Over load, Short ckt, Fault, Battery Low, Over Temp, PV Reverse, MCB trip, (Alpha numeric 16x2)				
Operating Temperature range	°C	0-50				
Storage Temperature range	°C	0-65				
Max RH	%	95				
Enclosure protection		20				

**Odin System Pvt. Ltd.**

**Registered Office:** Plot-49, House No 663,  
 Sec-13, Neelkanth Apts, Rohini, New Delhi- 110085  
 Website: www.zenvo.in, E-mail: info@zenvo.in  
 Help Line Number : 989-989-8775

