

GSS SERIES  
10KW - 200KW

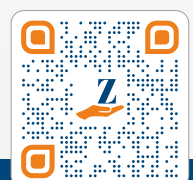


Fed up with Power Cuts?  
Tired from Generator Running Cost?  
Fed up with Battery Recurring Cost?

**GET SOLUTION**

**RUN YOUR LOAD FROM  
SOLAR WITHOUT MAINS & BATTERY**

Presenting





Topology with **High Utilization** factor in comparison with the conventional Solar PCU



The output of MPPT is fed to the power sharing module which ensures that the maximum power from solar is utilized for the inverter to function. In the event of a short-fall in power availability and demand of the load, the mains power is drawn to compensate the deficit to the difference of power required.

If the solar panel power availability is adequate to cater to the load demand no power is drawn from the grid and the solar shall take care of the battery charging.

**MPPT based using DSP  
Works without mains &  
Works without battery**

## Heavy Duty Industrial Grade Design

### Clean Power for critical application

For safety reasons, isolation is provided between the input and the inverter output. The DC to AC conversion is done using IGBTs with MPWM to generate network grade clean, pure sine wave output.

## Performance

Evaluates the performances of your solar installation using built-in multi functional user friendly LCD solar energy meter, along with real-time solar watt meter. Displays the solar energy generated and utilized in KWh(Units)

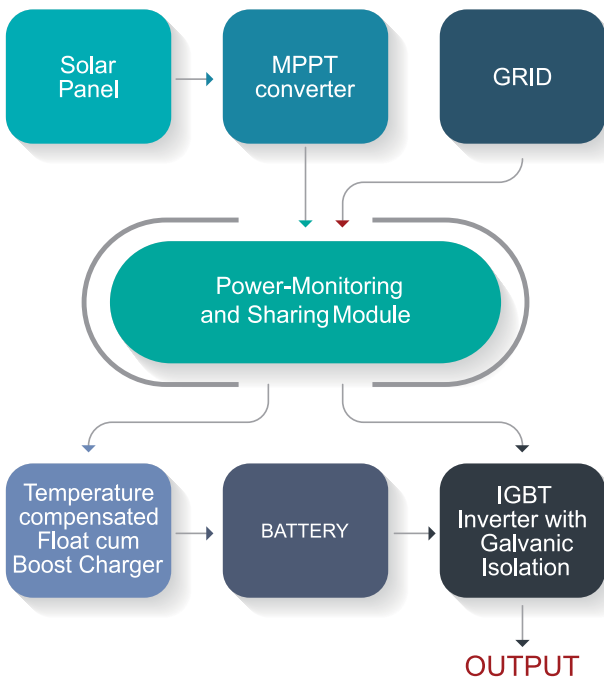
**Send an update of  
Solar power generated  
every day by SMS**



**Sends an update of units generated every day by SMS . SMS alert well in advance prior to shutdown/tripping for any reason.**

# GRID SHARING SOLAR UPS

## SALIENT FEATURES



- Excellent load sharing between solar and grid
- Ensures maximum solar energy conversion
- Rugged Industrial grade IGBT inverter with complete galvanic Isolation, ensures high quality power delivery
- High efficiency battery charger ensures the extended batter life by providing temperature compensation and Float cum Boost charger
- Ensures 100% utilization of solar power by using real MPPT converter

## GRID SHARING CONDITIONS OF UPS

Power sharing in GSS UPS for catering to the load can be configured as per requirement, with primary source as Solar power, secondary source as Grid, Battery as third source or with primary source as Solar, secondary source as battery bank, Grid power as third source. It can also be configured to work only on Solar and Grid without battery bank with Solar as the primary source.

Particular	When All Three Sources are Available	When Mains not Available	When Battery not Available	Both Mains & Battery not Available
Solar	✓	✓	✓	✓
Mains	✓	✗	✓	✗
Battery	✓	✓	✗	✗



## Technical Specifications

Rating	10KW-40KW	10KW-200KW
DC BUS	192VDC-360VDC	1920VDC-360VDC
Technology	MPPT technology using DSP & IGBT	
Topology	Deficit in Solar power is compensated from mains to supply the load demand Zero change-over time	
Advantages	<b>High Solar Power Utilisation Index</b> Unlike conventional Solar PCU, GSS Solar UPS does not transfer the load to mains if the Solar power is inadequate to supply the full load, making maximum utilisation of available solar power Ideal for critical load applications Best suited for all type of day load applications	
<b>SOLAR INPUT</b>		
Operating MPPT voltage	144VDC-180VDC	180VDC-325VDC
Maximum panel current	20A-50A	50A-600A
Reverse Polarity Protection	Short Circuit Diode	
Back feed protection	Protected using reverse diode	
MPPT efficiency	96% (peak)	
Charger type	Boost cum float charger	
Charging current on solar mode	0 - 55A	0 - 250A
Utility / Grid input voltage	220VAC, 1 $\Phi$ & N / 400VAC 3 $\Phi$ & N	400VAC, Three phase & Neutral
Input voltage window	180VAC-250VAC / 350VAC - 450VAC	350VAC - 450VAC
Input frequency	50HZ $\pm$ 6%	
Mains Charger type	PFC using IGBT rectifier	
<b>OUTPUT</b>		
On mains mode	180VAC-250VAC /350VAC - 450VAC	350VAC - 450VAC
On inverter mode	220VAC, 1 $\Phi$ , 50HZ $\pm$ 0.1HZ	400VAC, 3 $\Phi$ & N, 50HZ $\pm$ 0.1HZ
Load regulation		$\pm$ 1% on balanced & unbalanced load
Waveform	True sinewave	
Voltage THD	< 2% on linear load, <5% on non-linear load	
Overload capacity	100% continuous, 125% for 1 minute, 150% for 5 secs	
Inverter type	IGBT based PWM, with instantaneous sinewave control	
Transfer time	Zero	
Transient response	Remains within $\pm$ 0.5% and recovers to 100% within one cycle	
Crest factor	3:1	
Protections	<ul style="list-style-type: none"> <li>• Input Low/High</li> <li>• Over temperature</li> <li>• Battery low</li> <li>• Overload</li> <li>• Short circuit</li> </ul>	
Alarms	<ul style="list-style-type: none"> <li>• Mains fail</li> <li>• Battery low</li> <li>• Over temperature</li> </ul>	
Efficiency on 100% load	85% - 94%	
Multifunctional Solar LCD display	<ul style="list-style-type: none"> <li>• Solar voltage</li> <li>• Solar current</li> <li>• Solar power</li> <li>• Solar power generated &amp; delivered</li> <li>• Input voltage</li> <li>• Output voltage</li> <li>• Battery voltage</li> <li>• Load current</li> </ul>	
Interface	RS232 interface, GSM based SMS interface, Updates power generated per day SMS	
Salient Feature	<b>Predictive Analytics; SMS alerts well in advance prior to tripping due to any kind of fault for initiating preventive action</b>	
Optional feature	<b>Mains priority/Battery priority/Solar priority setting &amp; Battery DOD setting</b>	
Enclosure protection	IP-20	
Acoustic Noise level	<60db @ 1.5meter	
Operating ambient temperature	0 - 40°C	
Mode of operation	SR303 - Designed for short backup, CR303 - Continuous operation rated	
Testing standards	As per IEC 62040-3 / IEC 61683	

### Odin System Pvt. Ltd.

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