



Best In-house R&D  
ISO 9001-2015

# ACTIVE SHUNT SOLAR UPS

5KW - 200KW

With Predictive Analytics Software.



Sends an update  
of units generated  
every day by SMS.

SMS alert-well in  
advance prior to  
shutdown/tripping  
for any reason.



## INDUSTRIAL GRADE DESIGN

DSP based technology  
MPPT charge controller

ASS UPS 101 - 5KVA - 15KVA 1Ø-1Ø  
ASS UPS 303 - 15KVA - 200KVA 3Ø-3Ø

# Salient Features

- DSP based MPPT technology for optimum utilisation of solar power.
- Provided with DOD level setting.
- Option to select Mains/Battery/Solar as priority.
- RS-232 & GSM interface



IGBT based MPPT Solar Charge Controller



## Zero transfer time using Active Shunt Single conversion topology.

The UPS actively floats with the mains. (A combination of technology used in Active Harmonic filters & Grid-export solar UPS)

ASS UPS 101 & 303 - The **industrial grade** PCU in 1/1 & 303

Mains synchronised, near zero transfer time, ensures seamless functioning of connected critical loads.

— ASS UPS 101 - **5KVA - 15KVA 1Ø-1Ø**  
For PCs, smartclass, servers, IT labs, billing counters etc.

— ASS UPS 303 - **15KVA - 200KVA 3Ø-3Ø**  
For industrial automation & process machines, CNC, laser machines, motor loads etc.

**Active shunt -  
National award winner**  
"Most innovative power solution  
of the year 2016" by SoftDisk



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The advanced Predictive Analysis Technology uses 16 sensors at various Solar UPS points, monitoring component health, temperature, battery health, charge quality, speed of fan, internal reference voltages and drive signals; and initiates an alarm much before the tripping of Solar PCU, enabling graceful shutdown of UPS and other process.

# Active Shunt Solar PCU/UPS

## TECHNICAL SPECIFICATION

MODEL	ASS UPS 101	ASS UPS 303
<b>Technology</b>	MPPT technology using DSP & IGBT.	
Topology	Hybrid, Off-Grid PCU with mains connected	
Rating	5KW-15KW	10KW-200KW
DC BUS	48VDC-192VDC	120VDC-360VDC
<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 - 25A
<b>Utility / Grid input voltage</b>	220VAC, Single phase & Neutral	400VAC, Three phase & Neutral
Input voltage window	180VAC-250VAC	350VAC - 450VAC
Input frequency	50HZ $\pm$ 6%	
Mains Charger type	PFC using IGBT rectifier	
<b>OUTPUT</b>		
On mains mode	180VAC-250VAC	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% continous, 125% for 1min, 150% for 5 secs	
Inverter type	IGBT based PWM, with instantaneous sinewave control	
<b>Transfer time</b>	Near zero (0-2ms)	
Transient response	Remains within $\pm$ 0.5% and recovers to 100% within one cycle	
Crest factor	3:1	
Protections	• Input Low/High • Over temperature • Battery low • Overload • Short circuit	
Alarms	• Mains fail • Battery low • Over temperature	
Efficiency on 100% load	On mains mode - 98%	On inverter mode - 85% - 94%
<b>Multifunctional Solar LCD display</b>	• Solar voltage • Solar current • Solar power • Solar power generated & delivered • Input voltage • Output voltage • Battery voltage • Load current	
Interface	RS232 interface; GSM based SMS interface, Updates power generated per day SMS.	
<b>Salient Feature</b>	<b>Predictive Analytics; SMS alerts well in advance prior to tripping due to any kind of fault for initiating preventive action.</b>	
<b>Optional feature</b>	<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	SR303 - Designed for short backup, CR303 - Continuous operation rated	



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D-U-N-S No. 65052622  
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## Approved vendor for

Our esteemed customers have been using ACTIVE SHUNT SOLAR UPS various applications across the country from past 8yrs and have certified the performance of the same.



PARTIAL LIST