

# HYBRID SOLAR INVERTER



Using vast experience of designing of such power electronic products embedded with technological excellence from Australia, STATCON offers state-of-art single phase Hybrid Solar Inverter-Cum- charger system.

It consists of MPPT PWM Solar Charge Controller with Hybrid Inverter. As per the requirement, the same inverter can supply full DC power for charging of battery through 230V AC mains (wherever available). The Inverter can thus both charge the battery or supply the AC to connected Loads through Grid synchronisation. Provision for command to start / stop of DG set also available, in case battery gets discharged beyond certain level.

**Inverter can also be configured to export surplus power to grid.** The different control & monitoring options available are:

- ◆ Via the front panel LCD display and membrane key-pad. A structured, software menu-driven system is available for monitoring and setting up the inverter.
- ◆ Via a RS-232 / RS-485 and RJ-45 TCP/IP connection. These connections can be utilized to connect a PC to monitor and configured the inverter locally.
- ◆ The inverter can be connected to a SCADA system through the TCP/IP communication port available.

## SPECIAL FEATURES

- ◆ Adaptive algorithm for high efficiency MPPT Solar Charger
- ◆ High efficiency DC-DC power conversion
- ◆ Low current distortion and high PF during charging mode
- ◆ Available from 3KVA to 15KVA in wide voltage range
- ◆ Multi stage battery charging including temperature compensation
- ◆ Fast changeover time
- ◆ High inrush current
- ◆ Current sharing between Solar & AC when present
- ◆ Auto DG start-stop as per requirement
- ◆ Digital display with keypad control
- ◆ RS-485 with extended touch screen display
- ◆ Data logging with storage and GPRS monitoring

## APPLICATIONS

- ◆ Data Center
- ◆ Site Office
- ◆ Farm Houses
- ◆ Telecom Shelters
- ◆ Petrol Pumps
- ◆ Pipe Lines
- ◆ Railway Signaling etc.
- ◆ Hospitals / Apartments

## STATCON'S PRODUCT RANGE FOR SOLAR APPLICATIONS

- Off-Grid Solar Inverter
- 24V / 48V MPPT Charge Controllers
- 110V / 220V MPPT Chargers
- Intelligent String Monitor
- Array Junction Box
- 24V / 48V DC Solar-Mains-DG-Hybrid System
- MW Solar Inverter Solution from Answer Drives, Italy
- 3 Phase Bi-Directional solar Inverter

# HYBRID SOLAR INVERTER

## TECHNICAL DETAILS

Nominal Capacity*	3kVA	6kVA	10kVA	15kVA
Nominal Battery Voltage**	48V	110V	120V / 220V	220V
Maximum Battery Charging Current from AC	@ C/10 rate or as per design	@ C/10 rate or as per design	@ C/10 rate or as per design	@ C/10 rate or as per design
Overload	125% for 1 min. / 150% for 30 sec. / 175% for 5 sec.			
Nominal AC Voltage	230V AC, $\pm$ 15%, Single Phase			
Mains input frequency range	45 to 55Hz.			
Inverter / Charger efficiency	>90% at nominal voltage and power			
THD	<3%, with resistive load			
Output voltage regulation	2%			
PV charge controller type	PWM – MPPT Buck			
User Interface	128 – 64 Graphical Blue LCD with Backlight Membrane Keypad			
Protections	<ul style="list-style-type: none"> <li>Inverter Over voltage</li> <li>Inverter Over Load / Current Limiting</li> <li>Inverter Over Temperature</li> <li>Mains Under / Over Voltage</li> <li>Mains Under / Over Frequency</li> <li>Battery Health Monitoring (optional)</li> </ul>		<ul style="list-style-type: none"> <li>Short Circuit Protection</li> <li>PV Under / Over Voltage Cut-Off</li> <li>Battery Reverse Polarity Protection</li> <li>Battery Under Voltage</li> <li>Temperature compensation for battery charging</li> <li>Surge Protection</li> </ul>	
Battery type supported	Lead Acid Tubular, VRLA, Ni-Cd Charging characteristics tailored to suit the battery			
Monitored system parameters	Battery voltage, Current & Temperature Inverter voltage & current Mains Voltage, Current & Frequency Ambient Temperature Transformer temperature CO <sub>2</sub> saved IGBT			
Communication Port	Isolated RS232 DB-9 female connector Isolated RS485 screw terminal connector Ethernet 10-BASE-T RJ45 connector			
Inbuilt diagnostic system	Data logging in to non-volatile memory Data accessible through communication ports			
Circuit Breaker	PV Input, Battery Input, Mains Input, Load			
Operating Temperature	-10°C to 50°C without derating			
Enclosure	Floor standing indoor type			

\* Higher KVA ratings also available, \*\* different voltages can also be offered

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