

The SH series is an advanced TRUE SOLAR high efficiency Solar Power Conditioning Unit (PCU) which offers very unique and powerful features.

The load is automatically powered either from the Inverter or the Grid depending on the availability of Solar Energy and status of the battery. Similarly, the grid charger or the Solar charger comes ON depending on the battery charge status and the availability of Solar energy (See illustration). Solar charger always takes priority over Grid charger. It has two modes of operation - SOLAR mode to minimize electricity bill and NORMAL mode to maximize power availability. These powerful features make this a TRUE SOLAR PCU.

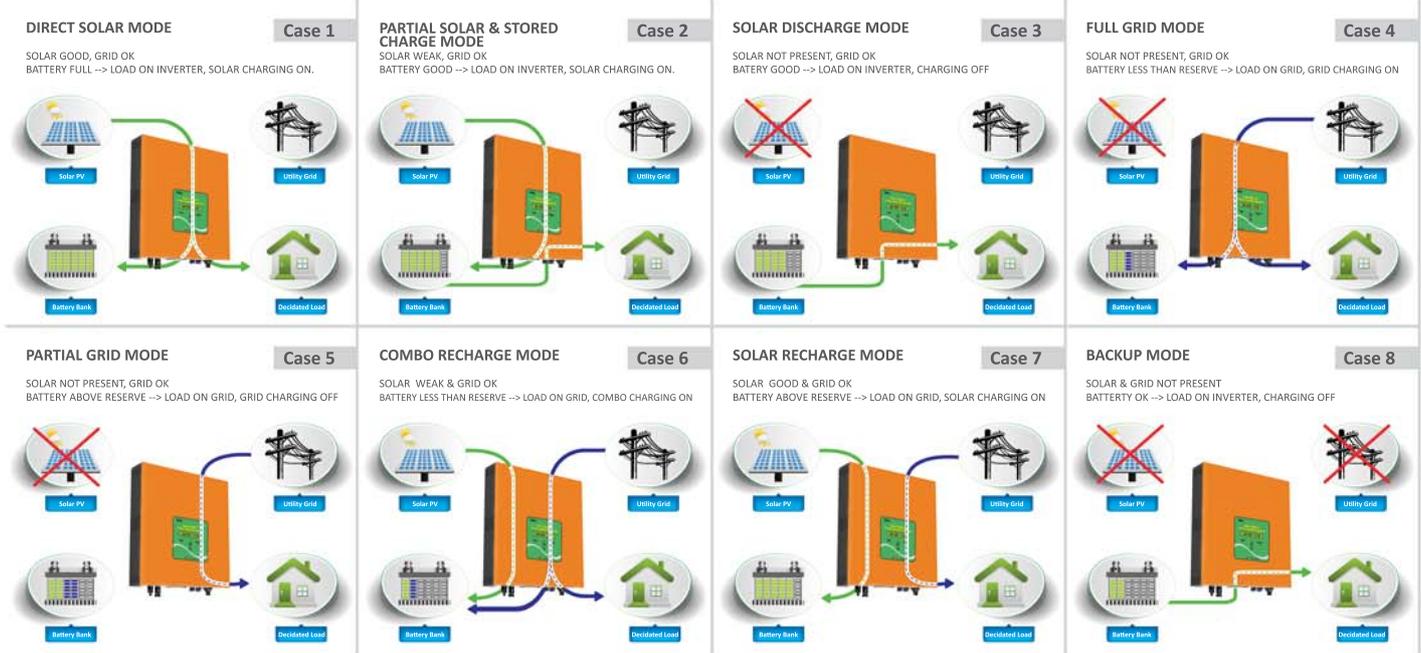
The output is highly regulated and stable pure sine-wave which can be used for any type of sensitive and expensive electronic equipments. It can run any domestic loads like Incandescent bulbs, CFL lamps, Fluorescent lamps, Halogen lamps, Fans, mixers, blenders, food processors, TV, music system, DVD player, Personal Computers etc.



## UNIQUE FEATURES

- High efficiency due to advanced SMPS technology.
- IGBT based high frequency inverter.
- User selectable SOLAR-BATTERY-GRID or SOLAR-GRID-BATTERY mode operation.
- Current controlled Combo Charger ensures that both solar charger and grid charger can run independently or concurrently.
- Automatic No-load cutoff saves battery charge when there is no load connected.
- Multi-function LCD display for status and fault annunciation.
- High level of protection from overload, short-circuit, over-temperature, battery low and battery overvoltage, reverse phase at output.
- Mains range selectable to 110V to 280Vac or 185 to 260Vac.
- Speed controlled cooling fan operation to optimize cooling based on loading.
- Low standby loss of <6W
- Good voltage regulation of +/- 1%
- Compact and light weight.
- Grid and DC fuse fail detection.

## TYPICAL MODES OF OPERATION



## TECHNICAL SPECIFICATION

Model	SH0K8B1-25	SH0K8B1-50	SH1K0B2-25	SH1K0B2-50
Rating	800VA/ 640W		1000VA/ 740W	
Battery Voltage (Nominal)	12V DC		24V DC	
Peak Inverter Efficiency	85%		91%	
Solar Array capacity (Max)	400Wp	800Wp	800Wp	1600Wp
Energy Input (Max)	2kWh/ Day	4kWh/ Day	4kWh/ Day	8kWh/ Day
Solar Array Voltage	14 to 21V		28 to 42V	
Solar Charger Technology	Zero drop switching PWM Control		Zero drop switching PWM Control	
Solar charger Boost Voltage	14.2+/-0.1V		28.4+/-0.1V	
Solar charger Float Voltage	13.6-13.8V		27.2 to 27.6V	
Grid SMPS Charge Current	10A+/- 1A		7A+/-1A	
Grid SMPS Float Voltage	13.7+/-0.1V		27.5+/- 0.1V	
Grid SMPS Boost Voltage	14.2+/- 0.1V		28.4+/- 0.1V	
A/c Fuse Rating	10A, 30mm Glass		10A, 30mm Glass	
DC Fuse Rating	2x 40A 20mm Blade		2x 40A 20mm Blade	
Dimension WxHxD mm	280x320x100		280x320x100	
Weight Kg	4.8kg		4.8kg	

## GENERAL

Inverter Output Voltage	220V±3V
Inverter Output Frequency	50Hz± 0.1Hz
Output Wave Form	Sine Wave
Minimum Load for Inverter Operation	10W
NORMAL Mode Operation	SOLAR-GRID-BATTERY
SOLAR Mode Operation	SOLAR-BATTERY-GRID
Cooling	Speed Controlled Forced Air
Protection	Short Circuit, Overload, Surge Load, Battery Low Voltage, Battery High Voltage, Battery Reverse Connection, Over Temperature
Load Type	Resistive, Inductive, Capacitive, Non-linear
Display & Annunciation	16x1 LCD Display with Backlight
Changeover Relay Rating	16A/250V (Resistive Load)
Grid Output Range in PC Mode	185+/-5V to 260+/-5V a/c
Grid Output Range in LIGHTING Mode	110+/-5 to 280+/-5V a/c
Changeover Time	<8mS in PC Mode & < 15mS in LIGHTING Mode
Mounting Style	Wall Mounting

Note: Specification may change as result of continuous improvement of the product. Contact factory for latest update Picture shown may have some variation in the actual product depending on model.

Authorised Dealer

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