



## BIS Certified Inverters

An ISO 9001, OHSAS 18001 Certified

## MPPT Solar PCU Lead Acid & Lithium-ion Battery Supported

MPPT Solar Inverters are a next generation solar inverters, High efficiency MPPT technology ensure 20% to 30% more solar power harvesting from the same capacity solar panels as compare to other technology. Its state-of-the art design and intelligent control optimizes the yield of all PV installations in residential, offices, rural and other remote installations with very poor or no grid availability. It consists of MPPT based solar charge controller and bi-directional inverter with transformer on the AC side. Transformer based design makes our inverter more rugged and reliable in worst grid input conditions. It provides uninterrupted Pure Sine Wave power at the load output using Solar, Battery and grid input in customizable order of priority.

Latest DSP based control ensures excellent performance and protection from any kind of malfunction. The high conversion efficiency helps in longer battery backup. Ease of operation and Plug 'N' Use type of design make it the ideal product for all kinds of users.

### Highlights

#### • Efficiency:

- a) MPPT Charge Controller @95%
- b) MPPT PCU / Inverter @85%
- c) MPPT Tracking Efficiency @99.5%

#### • Solar Feature:

- a) Sharing current solar with grid
- b) High efficiency

#### • ATC (Automotive Temperature Compensation)

- a) when temperature is below 25 degree, ATC is working to boost the battery V to optimum load so that you get the more back up.
- b) When temp. is above 25 degree, ATC is saving power in charging to reduce boost V.

#### • Grid Charging through multiple settings (0,5,10 & 15 Amp)

- **Battery Equalizer** inside to increase battery life & backup (not applicable for Lithium battery)

- Charge sharing features in Solar PCU
- Bi-Directional Technology
- Special in built MCB, which trips & protects all your appliances even before the traditional MCB can respond. (7.5KVA onwards)
- Isolation transformer, which provides safety to the user & the appliances.
- Generator compatible (50 Hz +/- 3%)
- 30% more efficient than conventional PWM/PCU
- Soft start technology
- Cold start technology
- Shows Charging Volt of the Battery
- DSP based automatic battery level management
- Compatible with Inverter load as well as UPS load
- Bypass switch for manual Operation
- Protection Inverter Batt. Low, Batt. High, Overload, Short Circuit, Overtemp, PV Reverse, PCB Trip/Fuse Trip.
- Selected Priority Modes for Solar/Grid/Battery.



# Technical Specifications

## MPPT Solar PCU Lead Acid & Lithium-ion Battery Supported

Model No.(Lead Acid)	SK1112M	SK2124M	SK2524M	SK3024M	SK3548M	SK5048M	SK7596M	SK10120M
Model No.(LITHIUM-ION BATTERY)	SKL1112M	SKL2124M	SKL2524M	SKL3024M	SKL3548M	SKL5048M	SKL7596M	SKL10120M
Ratings	1100VA	2100VA	2500VA	3000VA	3500VA	5000VA	7500VA	10KVA
ONLY For Lithium-ion (No. of cells)	4S	8S			15/16S		30S	38S
Nominal DC(Lead Acid /Lithium-ion)	12V/12.8V	24V/25.6V			48V		96V	120V/121.6V
Switching Element	MOSFET						IGBT	
Controller	DSP IC 32 BIT							
Charging Mode	Priority( Grid/Solar)							
	Solar Parameters							
MPPT	22V-50V	45V-100V			80V-160V		160V-350V	200V-400
For Max Current (MPPT)	30A	50A	60A		50A	60A	70A	70A
Battery Charging by Solar	20A							
	Inverter Parameters							
Output Voltage	220V ± 8%, 1ϕ							
Output Frequency	50Hz ± 1							
Max Load (±5%)	800W BULB LOAD	1600W BULB LOAD	8A	9.5A	10.5A	16A	26A	34A
Isolation Transformer	Provided Inbuilt							
Crest Factor	03:01							
Output Waveform	Pure Sine Wave							
THD (Linear Load)	< 3%							
THD (Non-Linear Load)	< 5%							
Overload	>100%,15 Second							
Inverter Efficiency	>85%							
Changeover Time	Inverter to Mains	< 10ms						
	Mains to inverter	< 12ms						
Protections & Alarm	Over and under voltage Grid, Overload, Battery Low & High, Short Circuit, Over Temperature				Over and under voltage Grid, Overload, Battery Low & High, Short Circuit, Over Temperature			
	Grid Input Parameters(UPS MODE) IT Load							
Input Low Cut Voltage	180V ± 5V							
Input Low Recovery Voltage	> 190V ± 5V							
Input High Cut Voltage	260V ± 5V							
Input High Recovery Voltage	< 250V ± 5V							
	Grid Input Parameters(Inverter MODE)							
Input Low Cut Voltage	90V ± 5V				120V ± 5V			
Input Low Recovery Voltage	> 100V ± 5V				> 130V ± 5V			
Input High Cut Voltage	290V ± 5V				270V ± 5V			
Input High Recovery Voltage	< 280V ± 5V				< 260V ± 5V			
Input Frequency Range	47Hz - 53Hz							
Battery Charging by Grid	Disable, 5A, 10A (Default), 15A (Sateable)							
	Battery Parameters							
Battery Type	Lead Acid Battery				Lithium-ion Battery			
Battery Low Buzzer	10.7V ± 0.2V Per Battery				3.0V PER CELL			
Battery Low Cut	10.5V ± 0.2V Per Battery				2.9V PER CELL			
Battery Flot	13.5V ± 0.2V Per Battery				N/A			
Battery Boost	14.5V ± 0.2V Per Battery				3.5V PER CELL			
Grid Charging Voltage (Equalize)	15.5V ± 0.2V Per Battery(After 30 Days)				N/A			
Protection	Overload, Battery Low, Battery High, Output Short Ckt., Battery Reverse ,Over Heat @90°C + 10°C , Over/Under Frequency, I/P Hi, I/P Low, SPV High.							
Display Parameters	LCD display for Input Voltage, Frequency, Battery - Voltage & Current,Load %, Solar -Voltage & Current & Power ,Temperature							
Display Alarms Protection	Output load Percentage, Grid - On / Fail / High / Low, Battery - Low Pre-alarm / Low Trip , Inverter - On / OFF, Overload Trip, Temperature							
Enclosure	IP 20							
Operating Temp.	0 to 40 Deg C							
Humidity	Up to 95% Rh (non-condensing)							
Cooling	Forced Air (FAN)							
Noise	< 55 dB, distance 1 meter							
Dimensions in mm (L X W X H)	230x272x111	280x274x258	345x335x230		600x350x482	700x350x520	700x350x520	
Weight (Approx. Kgs.)	12 Kgs	22 Kgs	25 Kgs	27 Kgs	39 Kgs	55 Kgs	65 Kgs	78 Kgs
Bypass Switch	Relay					SCR		
Wheels	Not Provided				Provided			

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