

# SUNBEE L Series (1-5KVA)

## 1-Ph In 1-Ph Out Off Grid MPPT Solar PCU

Model No.	SG1K12-M	SG2K24-M	SG2K48-M	SG3K48-M	SG5K48-M	
<b>Ratings</b>	1100 VA	2400 VA	2700 VA	3.5 KVA	5 KVA	
Switching Element	MOSFET					
Inverter Charger Topology	Boost					
Solar Charger Topology	MOSFET Based Buck Converter		IGBT Based Buck Converter			
Controller	32-Bit ARM Processor					
Max. Battery Capacity	200AH					
Inverter Priority Mode [Grid, Solar, Battery]	G»S»B	S » G » B (Default)				
	S»G»B					
	S»B»G					
<b>PV Parameters (With Inbuilt MPPT Charge Controller)</b>						
Solar Input Voltage Range(Min - Max)	21V-45V	40V-90V	80V-180V	80V-180V	80V-180V	
Maximum Solar Current	60A	60A	35A	50A	70A	
Nominal DC	12V	24V	48V	48V	48V	
<b>Inverter Parameters</b>						
Output Voltage	220V ± 8%, 1φ					
Maximum Output Current	3.2A	6.3A	6.3A	11A	16A	
Output Frequency	50Hz ± 1					
Isolation Transformer	Provided Inbuilt					
Crest Factor	3:1					
Output Waveform	Pure Sinusoidal					
THD	Linear Load	< 3%				
	Non Linear Load	< 5%				
Overload	> 100%, 30 Seconds					
Inverter Efficiency	> 85%					
Changeover Time	Battery to Mains	< 10ms				
	Mains to Battery	< 12ms				
Protections & Alarm	Over and undervoltage Solar/Grid, Over Load, Battery Low & High, Short Circuit, PV Reverse, Over Temperature					
Remote Monitoring Port RS232/RS485 (Modbus)	Optional					
<b>Grid Input Parameters</b>						
Nominal Grid Voltage	230V, 1φ					
Nominal Grid Frequency	50Hz					
Input Low Cut Voltage	170V ± 5V					
Input Low Recovery Voltage	> 180V ± 5V					
Input High Cut Voltage	270V ± 5V					
Input High Recovery Voltage	< 260V ± 5V					
Input Frequency Range	47Hz - 53Hz					
<b>Battery Parameters</b>						
Battery Charging	Grid	12A ± 1A				
	Solar	15A ± 1A				
Boost Voltage	Grid	14.5V ± 0.2V	29.0V ± 0.4V	58.0V ± 0.4V	58.0V ± 0.4V	58.0V ± 0.4V
	Solar	14.7V ± 0.2V	29.4V ± 0.4V	59.0V ± 0.4V	59.0V ± 0.4V	59.0V ± 0.4V
Float Voltage	Grid	13.4V ± 0.2V	26.8V ± 0.4V	53.5V ± 0.4V	53.5V ± 0.4V	53.5V ± 0.4V
	Solar	13.7V ± 0.2V	27.4V ± 0.4V	55.0V ± 0.4V	55.0V ± 0.4V	55.0V ± 0.4V
Equalization Voltage	Grid	15.5V ± 0.2V	31.0V ± 0.4V	62.0V ± 0.4V	62.0V ± 0.4V	62.0V ± 0.4V
	Solar	16.0V ± 0.2V	32.0V ± 0.4V	63.0V ± 0.4V	63.0V ± 0.4V	63.0V ± 0.4V
Battery Low Buzzer	10.7V ± 0.2V					
Battery Low Cut	10.5V ± 0.2V					
Battery Low Reconnect	11.8V ± 0.2V					
Battery High	17.0V ± 0.2V					
Display Parameters	LCD display for Input & Output - Voltage, Current & Frequency, Battery - Voltage & Current, Solar Voltage & Current					
Display Alarms	Output load Percentage, Overload time, Grid - On / Fail / High / Low, DC - On / High, Battery - Low Pre-alarm / Low Trip Inverter - On / Trip / High / Low / Over Load, Temperature					
Switchgear	Grid MCB, Battery MCB, Solar MCB, Manual Bypass Switch					
Enclosure	IP 20					
Operating Temp.	0 to 40 Deg C					
Humidity	Upto 95% Rh (non-condensing)					
Cooling	Forced Air					
Noise	< 55 dB, distance 1 meter					
Dimensions in mm (L X W X H)	350 X 330 X 140	350 X 330 X 170	600 X 350 X 480			
Weight(Approx Kgs)	11.5 Kg	17 Kg	25 Kg	50 Kg	74 Kg	
Bypass Switch	Relay				Satatic Switch	
Wheels	Provided					