

SUN PLUS PRO (Solar Home PCU)

"Affordable Yet, Very Reliable"

Model Available SPP 920 to SPP 1420



FEATURES

- Inbuilt rMPPT Solar Charge Controller
- Support 12V & 24V Solar Panel with 12V System
- Battery Charging at Low Voltage (90V) Mains Input
- Compatible with IT Load
- Maintain battery health for longer life
- Modified Sine wave output
- Easy Installation & low maintenance
- Battery Charging with Multi stage (Bulk, Absorption & Float)
 Auto Equalize in a month
- Protections: RBP, RSPV, OVL, BL, BH, S.Ckt, I/P HV& LV, OHT
- Priority Mode Selection- 1) Hybrid 2) Smart For Saving Energy & Money
- Can Operated without Solar
- LED Display for Operation & Fault



TECHNICAL SPECIFICATION

SUN PLUS PRO (Solar Home PCU)

Parameters Producs		Rating						
Producs Model No.		SUN PLUS PRO SOLAR PCU SUN PLUS PRO 920 SUN PLUS PRO 1020 SUN PLUS PRO 1420 SUN PLUS PRO 1820						
System Rating		700VA	900VA	1100VA	1500VA			
Operating DC Voltage		700VA	12V	1100VA	24V			
Switching Element		MOSFET 24V						
Charger Topology		BOOST MOSFET						
Max. Battery Capacity		200AH						
Operating Mode (SMART/HYBRID)		HYBRID						
Parameters (Solar)								
Switching Element		MOSFET						
Type of Charge	r	МРРТ						
(-1.1)	Boost	14.7V <u>+</u> 0.2V (Each Battery)						
SPV Charging Voltage (TUB)	Float	14.2V <u>+</u> 0.2V (Each Battery)						
Maximum PV Power Recommended				0Wx1				
Solar PV Maximum Voltage			25 -50 VOC		50 VOC			
Efficiency			>	95%	•			
Parameters (Grid)			Defa	ult Value				
Nominal Grid Volt	age		230	0V 1Φ				
Nominal frequer	ncy		5	0Hz				
Battery Charging Metho	od 4 Stages		Bulk/Absorption	on/Float/Equalize				
Grid - Battery Charging Voltage	Boost	14.5V <u>+</u> 0.2V (Each battery)						
Gild - Battery Charging Voltage	Float	13.8V <u>+</u> 0.2V (Each battery)						
Grid - Battery Charging Volt	age (Equalize)		After	30 days				
Grid Charging Current	Normal/Boost		15A /18A	/12 A <u>+</u> 2A				
Grid Reconnect @ Batte	ry Voltage	11.8V ± 0.2V (Each battery)						
Grid Low Cut Voltage		170V + 10V						
Grid Low Cut Recovery	1	180V ± 10V						
Grid High Cut Voltage	IT MODE ENABLE	265V ± 10V						
Grid High Cut Recovery	†	255V <u>+</u> 10V						
Grid Low Cut Voltage								
Grid Low Cut Recovery	 	80V ± 10V						
Grid High Cut Voltage	IT MODE DISABLE	90V ± 10V						
Grid High Cut Recovery	 	280V <u>+</u> 10V 275V <u>+</u> 10V						
Change Over (Battery to Mains)				7 <u>+</u> 10 v 8ms				
Change Over (Mains to Battery)	IT MODE ENABLE			L5ms				
Parameters (Inverter)			•	.51115				
Output Phase				1Ф				
Nominal output vo								
Nominal Freque	_	230V±10% RMS 50 Hz±1%						
Max. Output Curi	·	2.1A 2.9A 3.5A 4.3A						
Output Wavefor		Modified Sinewave						
Battery Low Buzz		10.8V ± 0.2V (Each battery)						
Battery Low Cu		10.5V + 0.2V (Each battery)						
Battery High Cu		16.5V ± 0.2V (Each battery)						
Typical Efficience	· -		≥80% ≥85%					
	IT Mode Disable	>100% /) 3Time Auto Reset . 4th Time				
Over Load Capacity	IT Mode Enable	>100% After 30 sec delay (with Alarm) 3Time Auto Reset , 4th Time Shut Down >100% After 30 sec delay (with alarm) 1st Time Shut Down						
Dunta -ti			Overload, Battery Low, Battery High, Output Short Ckt, Battery Reverse (Fuse Blown) ,					
Protection		Over Heat @90*C ± 10*C , SPV High, SPV Reverse , I/P HV, I/P LV						
LED Indication		System ON, Grid Status, Over load/Heat , Grid chg., Batt. ON, SPV Chg. Batt. Status .						
Switches	<u> </u>	System ON, (IT Mode, Hybrid , Boost Charging)						
Parameters (Enviror								
Operating Tempera	ature	0-45°C						
Cooling				Fan				
Max. Relative Humidity @ 25°C	, ,			95%				
Noise @ 1 meter				OdB				
Standard Compliance		i		P20				
Weight (kg)	W11)	7.6	8.4	13.3	14			
Dimension (LXW)	XH)	275X	(305X131mm	302*30	6*165 mm			

^{*}Specification are subject to change without prior notice due to constant improvement in design & technology.



GAMMA⁺ (Solar Home PCU)

"Get Two Battery Back -up in Single Battery"

GAMMA+

ROD

FINA

Model Available GPP1012-GPP3400





FEATURES

- Controller based design, Pure Sine Wave, Built in rMPPT Charge Controller.
- Multi-colour LCD Display.
- Freq.:- Available 50Hz & 60Hz.
- Charging Multi Stage (Bulk, Absorption & Float)
- Solar Priority of load & Battery Charging.
- Preference to Solar Power over Grid Power.
- Pure sine wave output.
- Protections: RBP, RSPV, OVL, BL, BH, S.Ckt, I/P HV & LV, OHT.
- Compatible with DG as an input Source.
- Compatible with IT Load.
- Compatible with Tubular Batteries (Lithium) .
- Priority Selection PCU, Smart & Hybrid for Saving Energy and Money.
- Support 1HP Motor in Model No 2600 and 3350.



TECHNICAL SPECIFICATION

GAMMA⁺ (Solar Home PCU)

Parameters							
Model Name				Gamma+ PCU			
Model No.		GPP1012	GPP1650	GPP2000	GPP2600	GPP3400	
System Rating		1000VA	1400VA	1500VA	2000VA	3000VA	
Operating DC Voltage		12V 24V MOSFET]
Switching Element			-				
Charger Topology Max. Battery Capacity			-				
Operating Mode	SMART/PCU/HYBRID		-				
Optional DG mode	Enable/Disable						
Input Voltage Range (Min - Ma	x) Voc	15V-53V	30V-53V	30V-106V		60V-106V	_
Solar Power Maximum		1000W	1650W	1500W	2000W	3000W	
Solar Panel Recommended (V	Vatt)	165x6P, 200X5P (335x3P*) (400/440/540X2P*)	(335x4P*) (400x4P*) (440/540/550x3P*) (590x2P*)	335 (2S* & 2P*) 400 (2S* & 2P*), (540X3P*) Parallel	335 (2S* & 3P*) (400/440 (2S* & 2P*), (540X3P*) Parallel	590 (2S* & 2P*) 440/540 (2S* & 3P*) 400 (2S* & 4P*)	
Parameters (Grid)			Variable Settable Range (Each Batt.)				
Nominal Grid Voltage							
Nominal frequency Frequency Range			-				
Battery Charging Method 3 Stages				47-53Hz ± 1Hz Bulk/Absorption/Float	İ		-
Default charging mode TUB (LITHIUM)				Tubular			
Grid - Battery Charging Voltage (TUB)	Boost Float	14.5V ± 0.2V 13.8V ± 0.2V				13.5-15V 13-14.2V	
Grid - Battery Charging Voltage	Boost / Float	13.8V ± 0.2V					13.5V-14.2V
(LITHIUM)		404/454 : 01	454/004 : 24	13.0V ± U.ZV	404454 : 04		
Grid Charging Current Optional Grid charging	Normal/Boost Enable/Disable	10A/15A ± 2A	15A/20A ± 2A	Enable	10A/15A ± 2A		1A-20A
Grid Reconnect @ Battery Vol				11.8V ± 0.2V			11-12V
Grid Reconnect @ Battery Vol	<u> </u>			12.4V ± 0.2V			12-13V
Grid Low Cut Voltage	, , , , , , , , , , , , , , , , , , ,			170V ± 10V			
Grid Link Cut Veltage	IT Mode Enable			180V ± 10V			
Grid High Cut Voltage Grid High Cut Recovery				265V ± 10V 255V ± 10V			-
Grid Low Cut Voltage				100V ± 10V			
Grid Low Cut Recovery	IT Made Disable			110V ± 10V			
Grid High Cut Voltage	IT Mode Disable			290V ± 10V			
Grid High Cut Recovery	IT Mada Faabla/Disabla			280V ± 10V			-
Change Over (Battery to Mains)	IT Mode Enable/Disable IT Mode Enable			<8ms <12ms			-
Change Over (Mains to Battery)	IT Mode Disable			<30ms			1
Parameters (Inverter)							
Output Phase Nominal Output Voltage				1Φ 230V			
Output voltage range				230V ± 10%			-
Nominal Frequency			50Hz/60Hz				
Max. Output Current		2.9A					
Battery Low Buzzer (TUB)		2.071	4.3A	4.3A	5.6A	9.0A	
Battery Low Cut (TUB)		2.071	4.3A	10.8V ± 0.2V (Each Batte	ry)	9.0A	Battery Low Cut-0.3V
		2.071	4.3A	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte	ry)	9.0A	10-11.5V
Battery Low Cut (TUB) Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM)		2.071	4.3A	10.8V ± 0.2V (Each Batte	ry) ry) ry)	9.0A	
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB)			4.3A	10.8V \pm 0.2V (Each Batte 10.5V \pm 0.2V (Each Batte 11.9V \pm 0.2V (Each Batte 11.6V \pm 0.2V (Each Batte 16.5 \pm 0.2V (Each Batter	ry) ry) ry) ry) ry)	9.0A	10-11.5V Battery Low Cut-0.3V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM)			4.JA	$\begin{array}{l} 10.8V\pm0.2V \text{ (Each Batte} \\ 10.5V\pm0.2V \text{ (Each Batte} \\ 11.9V\pm0.2V \text{ (Each Batte} \\ 11.6V\pm0.2V \text{ (Each Batte} \\ 16.5\pm0.2V \text{ (Each Batter} \\ 14.5\pm0.2V \text{ (Each Batter} \end{array}$	ry) ry) ry) ry) ry)	9.0A	10-11.5V Battery Low Cut-0.3V 11-12V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform				10.8V \pm 0.2V (Each Batte 10.5V \pm 0.2V (Each Batte 11.9V \pm 0.2V (Each Batte 11.6V \pm 0.2V (Each Batte 16.5 \pm 0.2V (Each Batter	y) y) y) y) y) y)	9.0A	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM)		>8	0%	$\begin{array}{l} 10.8V\pm0.2V \text{ (Each Batte} \\ 10.5V\pm0.2V \text{ (Each Batte} \\ 11.9V\pm0.2V \text{ (Each Batte} \\ 11.6V\pm0.2V \text{ (Each Batte} \\ 16.5\pm0.2V \text{ (Each Batter} \\ 14.5\pm0.2V \text{ (Each Batter} \end{array}$	ry) ry) ry) ry) ry)	9.0A	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (LITHIUM) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency	IT Moda Dieablo	>81	0% <3% After 30 sec delay (with ala	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 16.5 ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter Sinewave (Linear Load)	ry) ry) ry) ry) ry) ry) y) y) >82% ime Shut Down	9.0A	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic	IT Mode Disable	>81	0% <3% After 30 sec delay (with ala fotor Load Run for 15min w	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter Sinewave ((Linear Load) thin 3Time Auto Reset , 4th T th alarm (1 Sec ON, 5 Sec C	y) y) y) y) y) y) y) y) >82% ime Shut Down FFF) in 2600 Model .	9.0A	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (LITHIUM) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency	IT Mode Disable	>81	0% <3% After 30 sec delay (with ala fotor Load Run for 15min w	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter 44.5 ± 0.2V (Each Batter Minewave 10.10 (Linear Load) (Linear Load) (Sec 0.0), 5 Sec 0.0 sec delay (with Alarm) 1s	ry) ry) ry) ry) ry) ry) yy) >82% ime Shut Down PFF) in 2600 Model . st Time Shut Down	9.0A	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic		>81	0% <3% After 30 sec delay (with ala fotor Load Run for 15min w	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter Sinewave ((Linear Load) thin 3Time Auto Reset , 4th T th alarm (1 Sec ON, 5 Sec C	ry) ry) ry) ry) ry) ry) yy) >82% ime Shut Down PFF) in 2600 Model . st Time Shut Down	9.0A	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (LITHIUM) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP		>8/ >100% Note : 1HP N	0% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter Sinewave ((Linear Load) 10) 3Time Auto Reset , 4th T 10 th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dou	ry) ry) ry) ry) ry) yy) >82% ime Shut Down rFF) in 2600 Model . st Time Shut Down wn Yes (<6.5A) rese (Fuse Blown) , Over H	Yes	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (LITHIUM) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection		>88 >100% Note: 1HP N	0% After 30 sec delay (with alal fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter 44.5 ± 0.2V (Each Batter (Linear Load) (Linear Load) (Linear Load) (See Collay (With Alarm) 1: >150% Output Goes Down Short Ckt, Battery Reveguency, I/P High, I/P Low, \$1.50% (Linear Load)	ry) ry) ry) ry) ry) ry) y) y) >82% ime Shut Down oFF) in 2600 Model . st Time Shut Down wn Yes (<6.5A) orse (Fuse Blown), Over H SPV High, SPV Low	Yes eat @90*C ± 10*C,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (ITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication		>88 >100% Note: 1HP N	0% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batte 4.5 ± 0.2V (Each Batter 5 inewave 4 (Linear Load) (yy) yy) yy) >82% ime Shut Down She's in 2600 Model . st Time Shut Down wn Yes (<6.5A) yerse (Fuse Blown) , Over H SPV High , SPV Low mode, Grid Chg.) Enable/D	Yes eat @90*C ± 10*C,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (LITHIUM) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection		>8ll >100% Note: 1HP N Overload, Batter Sy Battery Voltag	0% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB// System ON/OFF je, Charging Current, Grid	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter 44.5 ± 0.2V (Each Batter (Linear Load) (Linear Load) (Linear Load) (See Collay (With Alarm) 1: >150% Output Goes Down Short Ckt, Battery Reveguency, I/P High, I/P Low, \$1.50% (Linear Load)	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color)		>8ll >100% Note: 1HP N Overload, Batter Sy Battery Voltag	0% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB// System ON/OFF je, Charging Current, Grid	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batter 14.5 ± 0.2V (Each Batter Sinewave (Linear Load) m) 3Time Auto Reset , 4th T th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dov out Short Ckt, Battery Reve quency, I/P High, I/P Low, 5, LITHIUM, Boost Chg, DG r 5, UP, Down, Back, Enter (Voltage, Grid Frequency,	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar)		>8ll >100% Note: 1HP N Overload, Batter Sy Battery Voltag	0% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB// System ON/OFF je, Charging Current, Grid	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter 44.5 ± 0.2V (Each Batter Sinewave (Linear Load) my 3Time Auto Reset, 4th T th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dov to Short Ckt, Battery Reveguency, I/P High, I/P Low, 5LTHIUM, Boost Chg, DG 1; UP, Down, Back, Enter (Voltage, Grid Frequency, urrent, Operating Mode (H)	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color)		>8ll >100% Note: 1HP N Overload, Batter Sy Battery Voltag	0% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB// System ON/OFF je, Charging Current, Grid	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batter 14.5 ± 0.2V (Each Batter Sinewave (Linear Load) m) 3Time Auto Reset , 4th T th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dov out Short Ckt, Battery Reve quency, I/P High, I/P Low, 5, LITHIUM, Boost Chg, DG r 5, UP, Down, Back, Enter (Voltage, Grid Frequency,	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger	IT Mode Enable Boost	>8ll >100% Note: 1HP N Overload, Batter Sy Battery Voltag	3% After 30 sec delay (with ala ladotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/S) System ON/OFF Je, Charging Current, Grid Graph, Overheat, SPV Co	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter Sinewave (Linear Load) mm) 3Time Auto Reset, 4th T th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dou to Short Ckt, Battery Reve quency, I/P High, I/P Low, SLITHIUM, Boost Chg, DG T, UP, Down, Back, Enter (I Voltage, Grid Frequency, urrent, Operating Mode (H) Mosfet Mosfet MPPT 14.7V ± 0.2V (Each Batter)	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Chgarging Voltage (TUB)	IT Mode Enable Boost Float	>8ll >100% Note: 1HP N Overload, Batter Sy Battery Voltag	o% <3% After 30 sec delay (with ala flotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB// System ON/OFF ge, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batter 14.5 ± 0.2V (Each Batter Sinewave (Linear Load) """ "" "" "" "" "" "" "" "" "" "" ""	yy) yy) >82% ime Shut Down SFF) in 2600 Model . st Time Shut Down wn Yes (<6.5A) srse (Fuse Blown) , Over H SPV High, SPV Low mode, Grid Chg.) Enable/D For LCD Calibration) Output Voltage, Output Fre YB/PCU/SMT) , Solar ener	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14.15.5V 13.1-14.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (TUB) SPV Charging Voltage (LITHIUM)	IT Mode Enable Boost Float Boost / Float	>81 >100% Note: 1HP N Overload, Batter Sy Battery Voltag Battery	o% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/) System ON/OFF je, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter Sinewave (Linear Load) mm) 3Time Auto Reset, 4th T th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dou to Short Ckt, Battery Reve quency, I/P High, I/P Low, SLITHIUM, Boost Chg, DG T, UP, Down, Back, Enter (I Voltage, Grid Frequency, urrent, Operating Mode (H) Mosfet Mosfet MPPT 14.7V ± 0.2V (Each Batter)	yy) yy) >82% ime Shut Down SFF) in 2600 Model . st Time Shut Down wn Yes (<6.5A) rrse (Fuse Blown) , Over H SPV High, SPV Low mode, Grid Chg.) Enable/C For LCD Calibration) Output Voltage, Output Fre YB/PCU/SMT) , Solar ener	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14-15.5V 13.1-14.5V 13.6-14.4V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (TUB) SPV Charging Voltage(LITHIUM) SPV Charging Current (Batter) Battery Charging Method 3 Ste	Boost Float Boost / Float	>8ll >100% Note: 1HP N Overload, Batter Sy Battery Voltag	o% <3% After 30 sec delay (with ala flotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB// System ON/OFF ge, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter Sinewave (Linear Load) (ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14.15.5V 13.1-14.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (TUB) SPV Charging Voltage (TUB) SPV Charging Current (Batter) Battery Charging Method 3 Sta Efficiency	Boost Float Boost / Float	>81 >100% Note: 1HP N Overload, Batter Sy Battery Voltag Battery	o% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/) System ON/OFF je, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter 15.0% Output Goes Down of Seccond 16.0% Output	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	14-15.5V 13-11-15.5V 14-15.5V 13-1-14.5V 13-1-14.5V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (TUB) SPV Charging Voltage(LITHIUM) SPV Charging Current (Batter) Battery Charging Method 3 Ste	Boost Float Boost / Float	>81 >100% Note: 1HP N Overload, Batter Sy Battery Voltag Battery	o% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/) System ON/OFF je, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter 15.0% Output Goes Down 16.0% Output Goes Down 16.0% Output Goes Down 17.0% Output Goes D	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14-15.5V 13.1-14.5V 13.6-14.4V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (TUB) SPV Charging Voltage (LITHIUM) SPV Charging Current (Batter) Battery Charging Method 3 Sta Efficiency Parameters (Environment) Operating Temperature Cooling	Boost Float Boost / Float	>81 >100% Note: 1HP N Overload, Batter Sy Battery Voltag Battery	o% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/) System ON/OFF je, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter 14.5 ± 0.2V (Each Batter Sinewave (Linear Load) mm) 3Time Auto Reset, 4th T th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dou to Short Ckt, Battery Reve quency, I/P High, I/P Low, SLITHIUM, Boost Chg, DG T, UP, Down, Back, Enter (I Voltage, Grid Frequency, urrent, Operating Mode (H) Mosfet MoPeT 14.7V ± 0.2V (Each Batte 13.9V ± 0.2V (Each Batte 13.9V ± 0.2V (Each Batte Bulk/Absorption/Float >94% 0-45°C Fan	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14-15.5V 13.1-14.5V 13.6-14.4V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (LITHIUM) SPV Charging Voltage (LITHIUM) SPV Charging Current (Batter) Battery Charging Method 3 Sta Efficiency Parameters (Environment) Operating Temperature Cooling Max. Relative Humidity @ 25*4	Boost Float Boost / Float	>81 >100% Note: 1HP N Overload, Batter Sy Battery Voltag Battery	o% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/) System ON/OFF je, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batter 14.5 ± 0.2V (Each Batter Sinewave (Linear Load) "m) 3Time Auto Reset , 4th T th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dov but Short Ckt, Battery Reve quency, I/P High, I/P Low, 5, LITHIUM, Boost Chg, DG r 5, UP, Down, Back, Enter (f Voltage, Grid Frequency, urrent, Operating Mode (H') Mosfet MPPT 14.7V ± 0.2V (Each Batter 14.2V ± 0.2V (Each Batter 13.9V ± 0.2V (Each Batter 13.9V ± 0.2V (Each Batter 13.9V ± 0.2V (Each Batter 14.2V ± 0.2V (Each Batter 15.94% 0.45°C Fan 95%	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14-15.5V 13.1-14.5V 13.6-14.4V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (TUB) SPV Charging Voltage (TUB) Battery Charging Gurrent (Batter) Battery Charging Method 3 Sta Efficiency Parameters (Environment) Operating Temperature Cooling Max. Relative Humidity @ 25*6 Noise @ 1 meter	Boost Float Boost / Float	>81 >100% Note: 1HP N Overload, Batter Sy Battery Voltag Battery	o% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/) System ON/OFF je, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter 15.00 (Linear Load) 15.00 (Linear Load) 16.00 (Linear Load) 17.00	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14-15.5V 13.1-14.5V 13.6-14.4V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (LITHIUM) SPV Charging Voltage (LITHIUM) SPV Charging Current (Batter) Battery Charging Method 3 Sta Efficiency Parameters (Environment) Operating Temperature Cooling Max. Relative Humidity @ 25*4	Boost Float Boost / Float	>81 >100% Note: 1HP N Overload, Batter Sy Battery Voltag Battery	o% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/) System ON/OFF je, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batter 14.5 ± 0.2V (Each Batter Sinewave (Linear Load) "m) 3Time Auto Reset , 4th T th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dov but Short Ckt, Battery Reve quency, I/P High, I/P Low, 5, LITHIUM, Boost Chg, DG r 5, UP, Down, Back, Enter (f Voltage, Grid Frequency, urrent, Operating Mode (H') Mosfet MPPT 14.7V ± 0.2V (Each Batter 14.2V ± 0.2V (Each Batter 13.9V ± 0.2V (Each Batter 13.9V ± 0.2V (Each Batter 13.9V ± 0.2V (Each Batter 14.2V ± 0.2V (Each Batter 15.94% 0.45°C Fan 95%	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14-15.5V 13.1-14.5V 13.6-14.4V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (TUB) SPV Charging Voltage (TUB) SPV Charging Current (Batter) Battery Charging Method 3 Ste Efficiency Parameters (Environment) Operating Temperature Cooling Max. Relative Humidity @ 25*0 Noise @ 1 meter Standard Compliance	Boost Float Boost / Float	>81 >100% Note: 1HP N Overload, Batter Sy Battery Voltag Battery	o% <3% After 30 sec delay (with ala fotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/) System ON/OFF je, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.9V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 14.5 ± 0.2V (Each Batter 15.00 (Linear Load) 15.00 (Linear Load) 16.00 (Linear Load) 17.00	ry)	Yes eat @90°C ± 10°C, lisable equency, Load %,	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14-15.5V 13.1-14.5V 13.6-14.4V
Battery Low Buzzer (LITHIUM) Battery Low Cut (LITHIUM) Battery High Cut (TUB) Battery High Cut (LITHIUM) Output Waveform Typical Efficiency Voltage Harmonic Over Load Capacity Motor 1 HP Protection LED Indication Switches (Micro) Display (Multi Color) Parameters (Solar) Switching Element Type of Charger SPV Charging Voltage (TUB) SPV Charging Voltage (ITHIUM) SPV Charging Current (Batter) Battery Charging Method 3 Statefficiency Parameters (Environment) Operating Temperature Cooling Max. Relative Humidity @ 25*6 Noise @ 1 meter Standard Compliance BIS Approved	Boost Float Boost / Float	>8l >100% Note: 1HP h Overload, Batter Sy Battery Voltag Battery 18A ± 2A (Def.)	3% After 30 sec delay (with ala lotor Load Run for 15min w >100% After 3 NA ry Low, Battery High, Outp Over/Under free stem ON, (IT mode, TUB/I) System ON/OFF pe, Charging Current, Grid Graph, Overheat, SPV Cu	10.8V ± 0.2V (Each Batte 10.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.6V ± 0.2V (Each Batte 11.5V ± 0.2V (Each Batter 14.5 ± 0.2V (Each Batter Sinewave ((Linear Load) m) 3Time Auto Reset, 4th T th alarm (1 Sec ON, 5 Sec C 0 sec delay (with Alarm) 1s >150% Output Goes Dov but Short Ckt, Battery Reve quency, I/P High, I/P Low, 5, LITHIUM, Boost Chg, DG r 7, UP, Down, Back, Enter (f Voltage, Grid Frequency, urrent, Operating Mode (H) Mosfet MPPT 14.7V ± 0.2V (Each Batter 12.9V ± 0.2V (Each Batter 13.9V ± 0.2V (Each Batter 13.9V ± 0.2V (Each Batter 14.2V ± 0.2V (Each Batter 15.9V ± 0.2V (Each Batter 15.9	ry)	Yes eat @90*C ± 10*C, bisable equency, Load %, gy (KWH).	10-11.5V Battery Low Cut-0.3V 11-12V 16.5-17.5V 14.5-15V 14-15.5V 13.1-14.5V 13.6-14.4V

- Note. * Specification are subject to change without prior notice due to constant improvement in design & technology.
 - * Above mention battery parameter is according to single battery.

 * Solar Panel Max. (*S- Series, *P- Parallel)