MADE IN INDIA

Su-mak® SOLAR
PURE SINE WAVE

SUNNY PLUS
SOLAR HYBRID UPS
POWER CONDITIONING UNIT
1100/12V

MPPT BASED
SOLAR CHARGE CONTROLLER

www.sumaksolar.com

Technical Specifications 1100/12V

Model Name	Solar Hybrid UPS	
Capacity	1100/12V	
V.A. Rating	950VA	
Type	Single Phase Solar Power Conditioning Unit (PCU)	
Technology	DSP Based PWM Technology	
Power Device	MOSFETs	
INPUT PARAMETERS		
Nominal I/P DC Voltage	12V	
Input DC voltage Range	10.5-14.4V±0.2V	
Low Battery Warning user Selectable	11.2V ± 0.2	10.8V ± 0.2
Low Battery cut off user Selectable	11.0V ± 0.2	10.5V ± 0.2
Inverter Restart after low battery when mains is not available	Battery voltage should be 12.8V ± 0.2 V	
High Battery shutdown	15.5V ±1V	
No load Power Consumption when output is ON	Less than 20W	
OUTPUT PARAMETERS		
Waveform & Regulation	Pure Sine Wave, 220V ± 5%	
Frequency Regulation	50Hz ± 0.1Hz	
Efficiency (typical)	≥85%(80-100% Resistive load)	
Total Load	725W at unity PF @12Vdc	
Discharging current	(59±2)A	
Overload	150% for ≥ 10sec & Shut down with four retry.	
THD (Linear Load)	≤3%	
Crest Factor	≥3:1	
Power usage Priority	From PV Panel Array	
Transfer time	UPS Mode 15msec	WUPS 40msec
GRID INPUT PARAMETERS		
Grid power usage in setting-1(13.0V±2V)GP setting-2(12.2V±2V)SP setting-3(11.5V±2V)GP Note: When mains is back after selecting the specific priority, only then the setting will be display on LCD.	Automatic, if batteries voltage ≤ 13V+0.2V in GP mode and ≤ 12.2V+0.2V in SP mode and 11.5V±0.2V in SP mode. After attaining float charge stage mains power usage will discontinue when PV power ≥ 10W	
Transfer Time	Typical < 20msec / < 40msec	
Grid I/P Voltage Range W-UPS Mode	90VAC to 290VAC ±10V	
Grid I/P Voltage Range UPS Mode	185VAC to 265VAC ±10V	
Charging Current user Selectable setting	5A,10A,15A ± 1.5Amp	
Charging current Enable/Disable	User setting	
Current sharing	When solar charging current is increasing from 1A to 30A,Then grid charging current redces from 15A,10A,5A to	
Boost voltage in grid mode	14.4+Temperature Compensation	
Float voltage in grid mode	13.7+Temperature Compensation	

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SOLAR CHARGE CONTROLLER	
Maximum I/P PV Voltage	25V Per 36 cell Solar PV module
Solar Array	Single Array
Charging current Imax	30A
Solar charge controller rating	500Wp PV Module 30A current (typically)
Bulk voltage	14.4
Boost Voltage	14.6 + Temperature Compensation
Transition from float to bulk	Below float level for a cumulative period of 1 hour
Float Voltage	13.7 + Temperature Compensation
PROTECTION	Over Current,Battery over Charge Protection,PV Reverse Polarity,Reverse Current Flow, High Temperature,High Voltage
Automatic charger restart time after High Current	3.5 Minutes
High Temperature Cut- OFF inverter/SCC	102°C ± 5°C
High Temperature SCC Charger Reconnect	85°C ± 5°C
SCC Cooling fan ON	Current ≥10A
SCC Cooling fan OFF	Current ≤5A

Protection Messages:	
MAINS MCB TRIP LIFT MCB	*ATTENTION* OVERLOAD>100%
ATTENTION BATTERY LOW	OVERLOAD/HIGH TEMP SHUTDOWN
	SRT CKT/BACKFEED SHUTDOWN
	ATTENTION HIGH TEMPERATURE
Dielectric strength	2KV input/output with ground and 1.5KV between input & output
Operating Temp.	0°C to + 55°C
Storage Temp.	0°C to + 55°C
Acoustic Noise	< 60dB from one meter
Relative Humidity	0-95% Non-Condensing
IP RATING	IP-20
MASS OF THE EQUIPMENT	10.00Kg
OVERALL SIZE OF EQUIPMENT (WxDxH) ± 5MM	300mm(W) x 325mm(D) x 130mm(H)

*Specification can change without any prior notice.

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