



Su-Kam
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Solar Power Conditioning Unit



FEATURES

- It can be charged by Grid, Mains.
- Priority of charging is Solar.
- Over heating Protection
- Dual Display showing PV & Inverter output.
- Short Circuit & Over Load Protection
- Inbuilt Heavy Duty Solar Charge Controller.
- No Load Shut Down for load $\leq 5\%$
- Fully equipped with powerful Grid Charger.
- User friendly client and Web based Software

1 KVA, 2 KW to 6 KW

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08/09/SOLAR/02/UK

Su-Kam

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Global Certifications

ISO 9001:2000 ISO 14001:2004



www.su-kam.com

Technical Specifications

INVERTER OUTPUT POWER 1000VA/24VDC	
Wave form type	Sine wave
Technology	PWM (dsPIC based)
Output Voltage in Volts (AC)	230 V ± 5%
Output frequency in Hz	50 ± 1% Hz
Operating temperature	- 5 to + 40 C
Humidity	0 to 95% Rh
Efficiency	Typical 85% on resistive load 30-100%
Distortion (THD)	<5% on linear load
Forced ventilation	Thru Cooling Fan
Nominal Input voltage (DC)	24V
Battery Low Voltage warning/cutoff	23.4V±0.4V /22.5±0.4V
Load Reconnection	25.6V±/-0.4V
Input Terminal Reverse protection for Battery	To be provided through DC MCB
No Load Sense	No load shut down for load < -5%
Short Circuit protection	retry for 4 times & permanent out put OFF
Over load surges	150% for > 30 Seconds
Over Load Protection	retry for 8 times & permanent out put OFF
Over Heating protection	> 85°C±/3C
Grid Charging and Bypass Mode	
Grid I/P Range	Grid power connected to load when battery voltage ≤23.8 ±0.4 battery charging take place by grid power if it is available in specified range
Wide Window Range	
Grid low cut	175VAC ±10V
Grid low cut recovery	185VAC ±10V
Grid high cut	275VAC ±10V
Grid high cut recovery	265VAC ±10V
Narrow Window Range	
Grid low cut	200VAC ±10V
Grid low cut recovery	205VAC ±10V
Grid high cut	260VAC ±10V
Grid high cut recovery	250VAC ±10V
Grid charging current @24V	12A ±1A
Charge End Voltage	Grid charging stop when battery reaches 27.2V±/-0.4V and transfer to backup mode.
Change over time	Mains to backup mode in wide window range < 40 milliseconds Mains to backup mode in Narrow window range < 15 milliseconds Backup to Mains mode < 15 milliseconds
Solar Charge Controller	
Type	Series Regulator Common Negative
Maximum I/P PV Voltage	25V Per 12V Solar Panel
Solar Array	Single Array
Charging Current Imax.	> 40A
Bulk Voltage	28.4V
Adjustable Bulk Voltage	26.4V to 30V
Absorption Period	Hold battery voltage at bulk setting for a cumulative period of 1 hour
Float Voltage	27V
Protection	Over Current, Battery over Charge Protection, PV/Battery Reverse Polarity, Reverse Current Flow, High Temperature
Automatic Charger Restart Time after High Current	3.5 Minutes
Solar Charge Controller Power	24VDC @ 40Amp.
Minimum PV Voltage for night	< 4V (in sample there is only indication)
Maximum PV Voltage for day	> 6V (in sample there is only indication)
Solar Charge Controller to PV power connection time.	< 30sec.
Displays	
Displays	PV voltage, Battery Voltage, Battery low, grid charging, Output Voltage, Overload, short ckt., MCB trip, Charging Current, Day/Night mode, Wide window & Narrow window mode.
Operating Temp.	0°C to + 45°C
Storage Temp.	0°C to + 55°C
Acoustic Noise	< 30dB
PCU Weight	23.6 Kg.
PCU dimensions	450 x 245 x 356

Specifications are subject to change without prior notice.

Technical Specifications

Type	Single Phase Solar Power Conditioning Unit			
	DSP Based PWM Technology			
Ratings	2KW	3KW	4KW	5KW
Model No.	PCU2K48	PCU3K48	PCU4K96	PCU6K96
INVERTER				
INPUT PARAMETERS				
Nominal I/P Voltage	48V		96V	
Input Voltage Range	44-30V		88-120V	
OUTPUT PARAMETERS				
Voltage Regulation	230 + 2% / 110V + 2%			
Frequency Regulation	50Hz + 0.05Hz			
Efficiency	> 87%			
Output Waveform	Pure Sine Wave			
THD	< 3% (on Linear Load)			
Crest Factor	> 4:1			
GRID CHARGER				
Grid I/P Voltage Range	150VAC 270VAC			
Charging Current	12Amp + 1Amp		14Amp + 1Amp	
SOLAR CHARGE CONTROLLER				
Type	Series Regulator Common Negative			
Maximum I/P PV Voltage	25V Per 12V Solar Panel			
Solar Array	Single Array			
Charging Current Imax.	> 30A	> 45A	> 30A	> 45A
Bulk Voltage	56.4V		113V	
Adjustable Bulk Voltage	54-58V		108-116V	
Absorption Period	Hold battery voltage at bulk setting for a cumulative period of 1 hour			
Float Voltage	54V		108V	
Protection	Over Current, Battery over Charge Protection, PV/Battery Reverse Polarity, Reverse Current Flow, High Temperature			
Automatic Charger Restart Time after High Current	3.5 Minutes			
OTHER SPECIFICATIONS				
Indications	Indications for PV voltage, Battery Voltage, Output Voltage, Output Frequency, Output Current, Charging Current, Charging Mode, High Temp., High Current, Array Reverse Polarity etc.			
Operating Temp.	0°C to + 45°C			
Storage Temp.	0°C to + 55°C			
Acoustic Noise	< 60dB			
Relative Humidity	0-95% Non-Condensing			

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