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energy

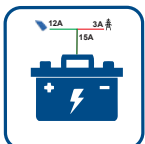
# SUN PRO

## SOLAR HYBRID UPS

930/12V - 5000/48V

PWM SERIES

Controlled Battery Charging



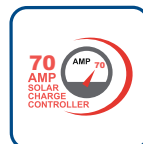
Intelligent Charging  
Sharing



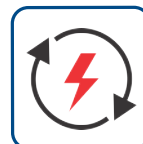
USER SETTABLE  
GRID/SOLAR PRIORITY



BUILT-IN ISOLATION  
TRANSFORMER



75AMP SOLAR  
CHARGE CONTROLLER



INSTANT  
CHANGEOVER TIME



24X7 MCB  
PROTECTION



24X7 PROTECTION  
DC MCB DOUBLE POLE



MANUAL  
BYPASS SWITCH

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# TECHNICAL SPECIFICATION

Model	SUNPRO 930	SUNPRO 1230	SUNPRO 1250	SUNPRO 2550	SUNPRO 3070	SUNPRO 3570	SUNPRO 4070	SUNPRO 5070
VA RATING	800VA	1000VA	1025VA	2500VA	2750VA	3250VA	4000VA	5000VA
DC BUS	12V	12V	12V	24V	24V	24V	48V	48V
BULB LOAD in WATT +/- 1%	640W	800W	825W	2000W	2160W	2560W	3200W	4000W
SCC TYPE	PWM							
MAX PV CONNECTED IN WATT	600W	600W	800W	1800W	2.2KW	2.5KW	3.2KW	4KW
MAX PV CURRENT in AMP	30A	30A	50A	50A	70A	70A	70A	70A
<b>Mains Input mode</b>								
Mains AC low cut UPS mode	175VAC ± 10VAC							
Mains AC low cut recovery UPS mode	185VAC ± 10VAC							
Mains AC high cut UPS mode	265VAC ± 10VAC							
Mains AC high cut recovery UPS mode	255VAC ± 10VAC							
Mains AC low cut WUPS mode	90VAC ± 10VAC							
Mains AC low cut recovery WUPS mode	110VAC ± 10VAC							
Mains AC high cut WUPS mode	295VAC ± 10VAC							
Mains AC high cut recovery WUPS mode	285VAC ± 10VAC							
Input Frequency Range	40Hz to 60Hz							
Voltage Output in Mains Mode	Same as input							
Frequency Output in Mains Mode	Same as input							
<b>Battery</b>								
Battery Type	LA / Tubular / SMF							
DC input voltage	12V		24V				48V	
Battery Quantity 12V 100Ah to 220Ah	1		2				4	
Float charging voltage	13.7V±0.2V		27.4 +/- 0.4V				54.8 +/- 0.8V	
Boost charging voltage for Tubular and SMF Battery	14.5V±0.2V		28.0V +/- 0.4V				56.0V +/- 0.8V	
Boost charging voltage for LA Battery	14.0V±0.2V		29.0V +/- 0.4V				58.0V +/- 0.8V	
Battery deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharge Battery)							
Battery High Cut	15.0±0.2V		31.0 +/- 0.4V				62.0 +/- 0.8V	
Charging Current 100Ah-135Ah	12A ± 1A							
Charging Current 150Ah-220Ah	15A ± 1A							
<b>Backup Mode</b>								
Output voltage	220VAC +5% -10% (untill battery low alarm)							
Output frequency	50Hz ± 0.2 Hz							
Output waveform	Pure Sine Wave ≤ 5% THD							
No Load current	≤ 4% of rated capacity							
Low Battery Warning	10.7V±0.2V		22V +/- 0.4V				44V +/- 0.8V	
Low Battery Cut	10.5V±0.2V		21.6 +/- 0.4V				43.2V +/- 0.8V	
Change over time UPS mode	< 10msec							
Change over time WUPS mode	< 25msec							
Crest Factor	1 : 5							
Peak Efficiency	86%							
<b>Protections</b>								
Overload in backup mode	≤ 100% Load Continuously run							
Short Circuit in Backup Mode	System will shutdown after 3 - retries in case of output short circuit							
Short Circuit in Mains Mode	Mains Fuse Blown							
Backfeed	System will shutdown in case of backfeed and there is no retry							
Over temperature	Yes provided, if heatsink temperature goes above 100°C System will shut down							
Reverse Battery	DC fuse will below							
Phase to Phase protection in mains mode	Yes provided by electronic							
<b>Solar Charge Controller</b>								
Solar Charge Controller type	PWM type							
Efficiency	> 96%							
Mains Charging Shairing	If PV power is not sufficient enough to charge the battery, system will start sharing battery charging from PV and grid.							
Load Shairing	Load Shairing is provided, solar will deliver the power as per load and battery requirement. Solar Current = Load Current + Batter Charging Current If load is 0% then it will protect the battery for over charging and increase the battery life deliver <18A current for battery charging.							
Option for Solar Mode & Normal Mode	Yes, provided, user can select Solar Mode or Normal Mode. Hense user can select to Save Maximum Power or Smart Power saving mode. Solar Mode: System will run the 100% load on solar whole days (9:AM to 4:PM) and charge the battery from solar. Normal Mode: System will run the 100% load on solar during peak hours (10:AM to 3:PM) and charge the battery from solar.							
100% Solar Priority & Solar Utilization	System is utilizing 100% solar power available							
Revse PV protection	Yes provided							
Revse current flow to PV	Yes provided							
<b>Display and Alarms</b>								
LCD Initial Display	Welcome, Contact Website Address, System Capacity, Charging Till 80VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battter Type Selected LA / SMF / Tubular, Battery Capacity Selected 100-135Ah / 150-200Ah,							
LCD Status Display	Mains ON, Input Voltage, Input Frequency, Battery Voltage, Battery Charging, Battery Charged, Charging Current, Backup Mode, UPS ON, UPS OFF, Battery Voltage, Load %, Output Voltage, Output Frequency, Mains Low Cut, Mains High Cut, Mains Not Available, Mains Frequency Cut							
LCD Fault / Protection Status Display	Mains Fuse Below / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Backfeed							
Buzzer	Audible beep for Overload, Short Circuit, Backfeed, Low Battery, Over Temperature, Mains Fuse below / MCB Trip							
<b>Safety</b>								
HV Test Input to Earth	Leakage current <5mA when 1.5KV applied for 1 min							
HV Test Output to Earth	Leakage current <5mA when 1.5KV applied for 1 min							
IR Test Input to Earth	>5MΩ between @ 500VDC							
IR Test Output to Earth	>5MΩ between @ 500VDC							
Earth Leakage current in Mains mode	< 2.5mA							
Earth Leakage current in Backup mode	< 2.5mA							
<b>Environment</b>								
Operating Temperature	0°C to 40°C							
Storage Temperature	0°C to 50°C							
Operating Relative Humidity	90% Non-Condensing							

**Manufactured By: INVERTEK ENERGY SOLUTION PVT. LTD.**

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