SUN PRO
SOLAR HYBRID PCU
PWM SERIES

TECHNICAL SPECIFICATIONS

invertek energy

Model	1230	1550	2050	2770	3270	3570	4070	5070	6570
DC BUS	12V		24V				48V		
SCC TYPE	PWM								
MAX PV CONNECTED IN WATT	600W / 28V	1000W/ 28V	1500W / 58V	2000W / 58V	2500W / 58V	3000W / 58V	3500/110V	4000W/110V	4500W/110V
MAX PV CURRENT in AMP	30 A	50A	50A	70A	70A	70A	70A	70A	70A
Manins Input mode									
Mains AC low cut UPS mode	170VAC ± 10VAC								
Mains AC low cut recovery UPS mode	180VAC ± 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	290VAC ± 10VAC								
Mains AC high cut recovery WUPS mode	280VAC ± 10VAC								
Input Frequency Range	40Hz to 60Hz								
Voltage Output in Mains Mode	Same as input								
Frequency Output in Mains Mode	Same as input								
Battery									
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		27.4V +/- 0.4V				54.8V +/- 0.8V		
Boost charging voltage for Tubular and SMF Battery	14.5V±0.2V		29.0V +/- 0.4V				58.0V +/- 0.8V		
Boost charging voltage for LA Battery	14.0V±0.2V		28.0V +/- 0.4V				56.0V +/- 0.8V		
Battery deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharge Battery)								
Battery High Cut	15.0±0.2V		30.0 +/- 0.4V				60.0 +/- 0.8V		
Charging Current	Upto 20A ± 2A								
Backup Mode									
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		21.4V +/- 0.4V				42.8V +/- 0.8V		
Low Battery Cut	10.5V±0.2V		21.0V +/- 0.4V				42.0V +/- 0.8V		
Change over time UPS mode	< 10msec								
Change over time WUPS mode	< 25msec								
Crest Factor	1 : 5								
Peak Efficiency	86%								
Protections									
Overload in backup mode	<100% Load Continuously run >100% to <120% Load, System will shut down in 2min >120% to <140% Load, System will shut down in 1min >140% to <160% Load, System will shut down in 17sec >160% to <180% Load, System will shut down in 6sec >180% to <200% Load, System will shut down in 3sec >200% Load, System will shut down in 850msec								
Short Circut in Backup Mode	System will shutdown after 3 - retries in case of output short circuit								
Short Circut in Mains Mode	Mains Fuse Blown			Mains MCB Trip					
Backfeed	System will shutdown in case of backfeed and there is no retry								
Over tempature	Yes provided, if heatsink tempature goes above 100°C System will shut down								
Reverse Battery	DC fuse will belown								
Phase to Phase protection in mains mode	Yes provided by electronic								
Solar Charge Controller									
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								
Revrse PV protection	Yes provided								
Revrse current flow to PV	Yes provided								
Display and Alarms									
LCD Initial Display	Welcome, Contect Website Address, System Capacity, Charging Till 80VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battert 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 Belown / MCB Trip, Short Circuit, Overload, Battery Low, High Tempature, Backfeed								
Buzzer	Audible beep for Overload, Short Circuit, Backfeed, Low Battery, Over Tempature, Mains Fuse belown / MCB Trip								
Safety									
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								
Environment									
Operating Temperature	0°C to 40°C								
Storage Temperature	0°C to 50°C								
Operating Relative Humidity	90% Non-Condensing								