

	SMARTEN POWER SYSTEMS LIMITED	
	PRODUCT SPECIFICATION	
Model Name	Superb 6KVA/72V SOLAR PCU	
Mains Input mode		
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 W.UPS mode	110VAC ± 10VAC	
Mains AC high cut WUPS mode	295VAC ± 10VAC	
Mains AC high cut recovery W.UPS mode	285VAC ± 10VAC	
Input Frequency Range	48Hz to 52Hz	
Mains Charging Enable/Disable	Yes Provided,you can set by front switch	
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	72V	
Battery Quantity 12V 100Ah to 220Ah	6	
Float charging voltage	82.2V±0.2V	
Boost charging voltage for LA Battery	84V±0.2V	
Boost charging voltage for Tubular and SMF Battery	87V±0.2V	
Bulk Absorption Battery Voltage	88.8V±0.2V	
Battery deep Discharge Recovery	Yes (Independent Charger to Recover Deep Discharge Battery)	
Charging Current By Grid	15A±3A	
Backup Mode		
Output voltage	220VAC +5% -10% (until battery low alarm)	
Output frequency	50Hz ± 0.2 Hz	
Output waveform	Pure Sine Wave ≤ 5% THD	
No Load current	<1.8A	
Capacity	6000VA	
Discharging current @ full load	66A ± 2A	
Low Battery Warning	64.2V±0.4V	
Low Battery Cut	62.4V±0.4V	
Change over time UPS mode	< 4msec	
Change over time WUPS mode	< 25msec	
Switching Element	IGBT	
Cooling	Temp. Controlled Fan	
Protections		
Short Circuit in Backup Mode	System will shut down after 3 - retries in case of output short circuit	
Short Circuit in Mains Mode	Mains MCB Trip	
Back feed	System will shutdown in case of back feed and there is no retry	
Over temperature	Yes provided, if heat sink temperature goes above 100°C System will shut down	
Reverse Battery	DC MCB will trip	
Phase to Phase protection in mains mode	Yes provided	
Solar Charge Controller		
Solar Charge Controller type	MPPT	
Max Panel wattage can be connected	4500 WATT	
Maximum PV Voltage	200V	
Maximum Battery current	50Amp.	
Efficiency	> 93%	
Reverse PV protection	Yes provided, it will also display on LCD panel	
Switches	Menu(Select),up,Down,Esc.	
Reverse current flow to PV	Yes provided	
Sharing of current when PV and Grid Both are available	If PV power is not sufficient enough to charge the battery, system will start sharing battery charging from PV and grid.	
Grid and Battery priority	N/A	
DOD definition(Depth of Discharge)	Mains will be connect when battery voltage reach at defined value of the battery voltage.	
DOD (Depth of Discharge)	20%- if battery voltage is 12.5V Each Battery	
	30%- if battery voltage is 12.0V Each Battery	
	40%- if battery voltage is 11.5V Each Battery	
	50%- if battery voltage is 11.0V Each Battery	
Display and Alarms		
LCD Initial Display	Welcome, System Capacity, Charging Till 90VAC and Deep Discharge Battery, System Setting, UPS / WUPS mode, I/P range 90-295VAC / 170-265VAC, Battery Type Selected LA / SMF / Tubular, DOD.	
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, Battery Current, PV Current,PV Voltage.	
LCD Fault / Protection Status Display	Mains Low Cut, Mains High Cut, Mains Not Available, Mains Frequency Cut	
Buzzer	Mains Fuse Blown / MCB Trip, Short Circuit, Overload, Battery Low, High Temperature, Back feed	
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 50°C	
Storage Temperature	0°C to 50°C	
Operating Relative Humidity	90% Non-Condensing	